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ABSTRACT

This report is intended to describe and analyze the present state and future needs of performance-based materials. It is limited to materials presently available for dissemination. The first section outlines the background of the project and describes the procedures for selecting, classifying, and describing the materials. The second section comprises an alphabetical listing of all materials described. In the third section, the materials are classified and analyzed. A system of 11 categories is used to classify the major competency-type, substantive emphasis or function. The categories are 1) basic interactive teaching skills; 2) instructional planning and design skills; 3) teaching strategies; 4) analysis of classroom activity: interaction systems and guides; 5) instructional decision making; 6) student diagnosis and evaluation; 7) foundations of education; 8) content areas; 9) media and instructional technology; 10) educationa' staffing and instructional organization; 11) staff development. The materials are also analyzed for their behavioral status, the kinds of behavioral objectives attended to, their activity structure, and administrative features. The last two sections contain descriptions of the materials. One section includes detailed descriptions of materials previewed by the authors; the other contains short descriptions of non-previewed or limited availability materials. (RT)

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MATERIALS FOR MODULES: A CLASSIFICATION
OF COMPETENCY-ORIENTED TOOLS
FOR TEACHER EDUCATION

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Preface

We are present at the birth and infancy of the movement toward the development of performance-oriented, self-administering materials for the training of professional educators. Both of the definitive characteristics of these materials --the orientation toward performance criteria and their capability for self-administration-- will have, over the next ten years, a revolutionary effect. The first characteristic will result in a greater precision and power in teacher education, that is, the units of professional training will have an increasing effect on the real-life clinical behavior of the teacher. The second characteristic will give the teacher vastly greater control over his training because he will, in fact, train himself.

The present report results from a serious effort to identify the performance-based materials which are presently available for dissemination into operating programs. That is, they are developed, are reasonably precise and probably have some training power, and the faculty of a program can, through purchase or loan, actually lay hands on them.

We conducted the search in the late winter and early spring of 1971 chiefly by telephone, letter and personal contact. What we have here is a reasonable compilation of the state of the art as of April, 1971. As the report indicates, the behaviorality of the material could be improved (surprisingly, given the character of the creators). Much is very good, however. There exist, in disseminable form, materials to assist in the pre-active phases of teaching (studying learners, setting objectives, selecting learning strategies) and in the reactive or interactive phases (teaching skills, strategies, sensitivity). Systems are also available to teach the teacher how to study teaching and to identify ways of improving it.

Enough is available to enable the average program to become vastly more precise and self-taught. In fact, by Fall 1971 over half of our preservice program at Teachers College should be structured around materials we have made and around the materials herein listed.

We hope the resultant report will help Teacher Corps and other teacher education programs to move more rapidly toward precision and self-teaching in teacher education.

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Acknowledgements

The efforts and cooperation of many people are responsible for producing this report. First are the many authors and sources who generously shared their often unfinished materials, especially the directors of the Elementary Models of Teacher Education projects, the staffs of the Regional Educational Laboratories and the Technical Assistance Project (TAP) participants.

We are especially indebted to Lisa Gish of Teachers College, Columbia University, for managing the tedious job of organizing the final stages of production, to Chris Gullion, also of Teachers College, for lending us expert editing and design advice, and to June Brooks and Mary Belda for typing the report.

TABLE OF CONTENTS

Introduction.....	pages 1-9
A Listing of Competency-Oriented Materials for Teacher Education.....	11-17
Classification and Analysis of Competency- Oriented Materials.....	19-51
Descriptions of Previewed Materials.....	53-116
Short Descriptions (Non-Previewed and/or Limited Availability Materials).....	117-123
Additional Sources About Competency-Based Education.....	125-126

INTRODUCTION

Background of the Project

Competency or performance-based education grew out of the recent, nation-wide effort to improve teacher education. Motivated by the same desire, the National Teacher Corps requested its various local programs to move toward competency-based education in the design of their own training programs. This is no small task, as developers of the Elementary Models of Teacher Education programs can attest. Merely conceptualizing a sound, integrated performance-based program is a full-time job. Coupled with the details of implementation --developing or obtaining the material supports, training and coordinating the teacher education faculty and providing a comprehensive management schema-- the job is monumental, especially if programs begin from scratch.

Recognizing the difficulty of the task, the National Teacher Corps provided its local programs with assistance in their efforts to develop competency-based training programs. First, consultant services and workshops explaining the rationale and procedures for designing a competency-based program were provided. Second, Teachers College, Columbia University, was asked to identify and describe performance-based materials that were available and could be incorporated into local Teacher Corps programs. This report is the result of that effort.

Organization of the Report

The framework for the report emerged from our desire to maximize its potential uses. At the beginning we imagined a simple list and description of performance-based materials -- an annotated directory. However, as we began identifying and previewing the materials, we discovered that the state of performance-based materials was not highly developed. Some means of analysis was required to reveal the substantive gaps and behavioral limitations. Second, a functional classification system was needed to facilitate programmatic decision-making and integration. The report is intended, then, to both describe and analyze, to serve the purposes of materials selection and decision-making at the program-design level and to point up the present state and future needs of performance-based materials.

These purposes are reflected in its organization. The sections include this introduction which outlines the background of the project and the organization of the report, describes the procedures for selecting, classifying and describing the materials, and provides a summary analysis of the present status and uses of the materials; an alphabetical Listing of Competency-Oriented Materials for Teacher Education; A Classification of Competency-Oriented Materials; Descriptions of Previewed Materials; Short Descriptions of Non-Previewed Sources; and Additional Sources About Competency-Based Education. The introduction includes two descriptive charts. Figure B compares the format of the sources; the kind of behavioral objective attended to, the activity structure of the program, and the administrative features of the program. Figure A identifies the Behavioral Status.

Selecting the Materials

Some clarification on the nature and scope of the materials selected for this report is necessary because several kinds of sources related to performance-based education are presently available. Our focus was on identifying competency-oriented materials that would be the basic software for instructional modules. This parameter excludes general sources about competency-based education, as well as specifications for modules. However, in the course of our search, some excellent examples of these two types of materials did come to our attention and we have listed their sources in a special section of the report.

The substantive range of the materials includes "traditional" teacher education content as well as preparation for new educational forms and positions. Materials for training the teacher supervisors or team-leaders (a Teacher Corps staff position) were also included. Though our search was conducted for Teacher Corps whose programs involve preservice teacher training, the materials we located are applicable to inservice as well as preservice uses. In fact, the distinction is probably a spurious one!

The crucial criterion, of course, in selecting these materials was whether their form met the requirements of performance-based education. Initially, this meant the specification of behavioral objectives, the provision of adequate measures to assess those objectives and the identification of required levels of performance. It became evident very quickly that few programs met these behavioral standards (hence, the shift in the title of this report from Competency-Based to Competency-Oriented Materials for Teacher Education). Out of necessity our criterion loosened to include materials either explicitly or implicitly specifying behavioral objectives or for which behavioral objectives could be readily ascertained and/or those materials that provided a semblance of criterion measures, however behaviorally imperfect. In practice, this excluded only the usual textbook or printed sources and filmed sequences. Programmed texts and filmed sequences accompanied by provisions for analysis and discussion were included.

Probably many more sources than those described here meet this liberal behavioral criterion. This list cannot be viewed as exhaustive but merely exemplary of the kinds of products being developed. We know, for instance, that there are now many materials describing behavioral objectives -- what they are, the different kinds, and how to write them. We have not located nor listed all of those sources here. The relative state of abundance is generally true in highly defined areas such as behavioral objectives. In areas of less definition, the repository of materials is thinner.

Over fifty sources were contacted by telephone, letter and personal contact, including directors of the Models of Elementary Teacher Education programs, the Regional Educational Laboratories, the Research and Development Center for Teacher Education, selected commercial sources, technical assistance persons for Teacher Corps programs, and colleagues in teacher education. The result is a listing and description of approximately sixty material sources. Most of these have been previewed by the authors of this report. A few have been described by the developers of the materials. All of the materials are available or will be available shortly.

Format of Descriptions

There are two sections of materials descriptions. The first includes sources that have been previewed and are generally available. These are described and analyzed rather extensively. Sources that were not previewed or are available on a limited basis make up the second section of short descriptions.

The format of the descriptions in section one includes the following information: title; author or developer; publisher or source; cost; special ordering instructions; type of materials such as printed material, video-tapes, filmstrips; a description of the purpose, content, organization and administrative features of the materials; a description of the sequence of activities teacher-candidates would be engaged in while using the materials e.g. discussion, reading, micro-teaching; objectives and criterion assessment, an analysis of the present behavioral status and potential of the materials; and possible uses in existing teacher education programs such as clinical experiences connected with student teaching or methods courses.

Several terms are used interchangeably throughout the descriptions -- student, participant, teacher and teacher-candidate refer to the preservice or inservice teacher-in-training, the target-audience for these materials. Micro-teaching means an actual teaching experience with children while peer-teaching refers to a simulated teaching experience with one's peers such as role-playing.

Classification and Analysis of Materials

To facilitate decisions about materials selection and program design the previewed materials described in this report have been analyzed in four ways. First, an eleven-category system was developed for classifying the major competency-type, substantive emphasis or function of the materials. The categories are:

1. Basic Interactive Teaching Skills
2. Instructional Planning and Design Skills
3. Teaching Strategies
4. Analysis of Classroom Activity: Interaction Systems and Guides
5. Instructional Decision-making (Problem-solving)
6. Student Diagnosis and Evaluation
7. Foundations of Education
8. Content Areas
9. Media and Instructional Technology
10. Educational Staffing and Instructional Organization
11. Staff Development

This is a crude, hybrid classification system reflecting both emergent teacher education programs built upon behavioral competencies and those built upon a traditional, subject-matter course structure. This particular schema, probably a result of intuition and intention, initially served as an impressionistic taxonomy that provided some order to our search. It is

included in this report for its heuristic value in program design and materials selection. Many alternative classification systems are possible such as those based on role conceptions of the teacher or program components. This schema does not dictate program design; it is simply a vehicle for perceiving the relationships among behavioral competencies, program content or materials and program structure.

The materials have also been analyzed for their behavioral status, the kinds of behavioral objectives attended to, their activity structure and administrative features. The format for each of these analyses can be seen in the figures below.

Figure A

**Assessing the Behavioral Status of
Competency-Based Materials
for Teacher Education**

Title	Needs Specification of Objectives	Objectives Need Refining	Needs Assessment Measures

Assessment Measures Need Refining	Needs Level of Performance Identified	Complete

Assessing the Objectives, Instructional Format, and Administration of Competency-Based Materials for Teacher Education

10

Further explanation of the categories and the actual classification and analysis charts can be found in the section on Classification and Analysis of Competency-Oriented Materials.

Present Status of Materials

An analysis of the materials described here reveals some interesting patterns in regard to the degree of "completeness" they exhibit. This quality of completeness has several aspects.

In the section on Classification of Materials a chart is included which indicates the "behavioral" status of each item. Very few materials are rated as complete in the sense that they have: specific behavioral objectives stated; adequate assessment measures provided; required levels of performance identified. About one third of the materials need further specification of objectives. In most instances these objectives seem implicit in the materials and can probably be produced locally without much difficulty. One fourth of the materials lack assessment measures, but again in many instances these can be derived fairly readily from the existing materials. Almost all of the materials lack identification of required performance levels. This is the area that needs immediate work at the local level if a competency-based program is to be instituted. Some might consider this an inadequacy of the materials, but it may well be that identification of performance levels is a decision best reserved for those using the materials in the local situation.

Another aspect of "completeness" of materials is the range of types of behavioral objectives represented. This information is also included in the section on classification. Five types of objectives have been identified in the Handbook for the Development of Instructional Modules in Competency-Based Teacher Education Programs. They are: cognitive objectives; affective objectives; psychomotor objectives; demonstrative objectives (demonstrating teaching behaviors); consequential objectives (demonstrating changes in pupil behavior); expressive objectives (experience only). The available materials are heavily (over half) in the area of cognitive objectives. About one third of them are based on demonstrative objectives. None of them are designed for consequential objectives, and relatively few for expressive, affective, or psychomotor objectives. It will be fairly easy for local programs to design modules around expressive or psychomotor objectives, but much thought needs to be given to the designing of materials for affective and consequential objectives. Probably the best way to move immediately is to revise and extend existing materials using demonstrative objectives. With minor additions many of these could be developed to include consequential objectives.

The materials seem to be more complete as regards variety of instructional activities involved. The type of activity most frequently used is an observing-writing format. Observations may be in actual settings, such as classrooms, but more often they are based on films, videotapes, or slide-tapes. Students describe their observations, or respond to prepared questions, in writing. Several other types of learning activity are well represented. These are: reading-writing format; group discussion format; simulated teaching format; actual (or micro) teaching format. This variety of instructional formats is a strong point of the materials, for it enables the program planner to provide a more balanced learning experience.

Much the same variety exists as regards types of administrative procedures. A large number of materials are designed for self-administration by individual students. An almost equal number are developed for administration under the guidance of a knowledgeable instructor. A very few are organized for use with a group under the guidance of a "coordinator," or an instructor who is not particularly knowledgeable in the field. Several materials are set up for self-administration by small groups of students. Varying the administrative procedures also provides strength to a program, but the large number of materials designed for administration by a knowledgeable instructor emphasizes the need for staff retraining implicit in reorganizing for performance-based programs. Most teacher education faculties are not presently knowledgeable in the areas that these materials emphasize.

An interesting sidelight to this consideration of "completeness" of materials is the fact that the variety which exists may well be a happy accident. In analyzing the materials it became evident that each regional lab or development center has tended to specialize in a particular type of material. For example, the Far West Lab's minicourses involve cognitive and demonstrative objectives in a micro-teaching format which also makes use of observing-writing activities. The minicourses are all self-administered by individuals. Most of the programs developed by the Northwest Lab are based on demonstrative objectives in a group discussion format, and are administered by a knowledgeable instructor. Materials produced by the Research and Development Center for Teacher Education tend to be organized around cognitive objectives, for use in a reading-writing format, and they are self-administered by individuals. It is fortunate that this tendency to specialize resulted in development of a variety of types of materials, but it is important to note that a program must tap several sources in order to take advantage of this phenomenon.

Considerations for Program Planning: Individual Differences, Sequence and Integration

The question of variety of available materials is important if one assumes that a teacher education program should be responsive to individual differences. Typically, materials developed to enhance individualization of instruction respond to only one or two aspects of differences: differences in rates of learning and differences in areas of interest. Only rarely is there an opportunity for the student to vary his instruction relative to preferred amounts of structure or direction, preferred styles of thinking, preferred means of communication, or preferred amounts of human interaction. A program that is truly geared to individual learning patterns needs to take these factors into account.

Only a few of the materials reviewed here provide options within them which would allow for adaptation to individual differences of the latter four types mentioned above. Almost all of these options are in the area of administration of materials; for example, the materials on questioning skills can be self-administered by an individual or by a group. This particular type of flexibility would seem to relate chiefly to differences in preferred amounts of human interaction.

Happily for the program planner who does wish to provide more individual options, there is some variety of both instructional format and administra-

tion of materials within each category area. Some variety of types of objectives **also** exists within each category area. This variety can be seen by studying the charts which appear in the section on Classification of Materials.

Consider the problems and possibilities in relation to selection of materials in the category of "basic interactive teaching skills." Under the topic of questioning skills there are two types of materials available. The minicourse materials utilize a micro-teaching format and are self-administered by an individual, while the Allen materials (General Learning Corporation) on questioning skills utilize a simulated teaching format and can be self-administered by either an individual or a group. It is probably not economically feasible to have both types of materials available to teach an area such as questioning skills. But the program planner might provide variety and balance by choosing to use (for example) the minicourse to teach questioning skills, the Discovery Teaching Simulation materials to focus on reinforcement techniques, and "Facilitating Inquiry in the Classroom" to focus on interactive techniques related to problem solving.

All of these three items deal with questioning skills. The latter two deal with a number of other skills in addition. The Discovery Teaching materials utilize a simulated teaching format and can be administered by a group or by a coordinator. "Facilitating Inquiry in the Classroom" utilizes a group discussion format and is administered by a knowledgeable instructor. These three items, then, provide a variety of options to the student within the general category of **interactive** teaching skills. By careful selection of materials with an eye to the question of variety and balance, the program planner can provide options within each category area as well as options across category areas, thus achieving a good deal of flexibility in providing for individual differences in students.

Another important consideration is effective sequencing of materials. One possible basis for sequencing is the concept of "progressive increase of involvement." On this basis one might decide to begin with systems for observing children and/or classroom interaction (Analysis of Classroom Interaction; Foundations of Education), move to pre-active teaching skills (Instructional Planning and Design; Student Diagnosis; Decision-making), and finally to interactive teaching skills (Basic Interactive Teaching Skills; Teaching Strategies).

Another way to organize materials in sequence might be in relation to generality of ideas or skills. Some curriculum planners opt for starting with the more general and working to the more specific. In this type of organization, materials such as the Northwest Lab's "Facilitating Inquiry in the Classroom" and "Development of Higher Level Thinking Skills" would precede materials such as the minicourse on "Effective Questioning."

Materials might also be sequenced in terms of type of behavioral objective. One would begin with a set of materials organized around an expressive or affective objective, move to materials geared for a cognitive objective, and then progress to materials designed around demonstrative and consequential objectives. This cycle could be repeated

several times in relation to various topics.

A program which is highly individualized may leave decisions of sequence of experiences up to the individual student. But even in this instance it will be important to suggest possible alternatives to the student. He will need to understand alternatives in order to exercise his options effectively.

A third consideration in program planning is the integration of these materials. For example, it is possible that the assessment measures in the category of basic interactive teaching skills could be behaviorally improved by adapting the materials from Observation Systems and Guides, or that measures for Planning and Design Skills could be coordinated with materials from Student Diagnosis and Evaluation. In addition to improving the behavioral status, coordination of materials can produce a more substantively integrated, in-depth educational experience. Materials can be selected so that learning activities in methods courses, foundations courses and clinical experiences dovetail with each other. For example, in a student's laboratory experience he can be learning a science inquiry teaching strategy and the basic interactive skills for inquiry (e.g. Facilitating Inquiry in the Classroom), while in a Science Methods block he is completing a sequence on instructional planning and design (e.g. The Teaching of Science: A Self-Directed Learning Program). Back in the clinical block he may then engage in instructional decision-making tasks.

Decisions, Decisions, Decisions

There are several decisions that need to be made prior to selection of materials for a program. Some of the questions that might be asked appropriately are:

1. What types of levels of behavioral objectives do we wish to emphasize most strongly?
2. What types of instructional format do we believe to be most effective?
3. What types of administration of materials will be most feasible for our program?
4. How much retraining of staff will be necessary for use of various materials?
5. How much revising of materials (or development of new materials) are we willing and able to do?
6. What aspects of individual learning patterns do we wish to provide for?
7. What basis will we use for sequencing of materials?
8. What materials seem to provide the most variety of uses in the most economical way?

The framework for describing and analyzing programs that we have used in this report may provide a basis for making some of these decisions.

A LISTING OF
COMPETENCY-ORIENTED MATERIALS
FOR TEACHER EDUCATION

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page°</u>
Analysis of Teaching Behavior Gene E. Hall	Research and Development Center for Teacher Education The University of Texas Austin, Texas	53 33, 51
The Assessment Training Kit C. Lisa Lewis and S.L. Menaker	Research and Development Center for Teacher Education University of Texas Austin, Texas	55 51
The Basic Course: Teaching is Learning to Listen; Activities in Metaphor W.J.J. Gordon and Tony Poze	Synectics Education Systems 121 Brattle Street Cambridge, Massachusetts 02138	56 31
Basic Teaching Tasks: A Teaching Laboratory Manual for Beginning Teacher Candidates O.L. Davis, Thomas B. Gregory, Marcella L. Kyselka, Keven R. Morse, B.R. Smoot	Research and Development Center for Teacher Education University of Texas Austin, Texas	58 21, 25, 29, 31
*Behavioral Objectives Package	Southwestern Cooperative Educational Laboratory 117 Richmond Drive N.E. Albuquerque, New Mexico 87106	117
Cameras in Education Educational Media Laboratories	Technifax Education Division The Plastic Coating Corpora- tion Holyoke, Massachusetts 01040	59 47
Classroom Behavior Analysis and Treatment Robert L. Spaulding	Dr. Robert L. Spaulding, Dir. Child Development Institute San Jose State College San Jose, California 95114	61 33, 37, 51
Classroom Management Simulation System Paul Twelker	Simulation Systems Program Teaching Research Division Oregon State System of Higher Education Monmouth, Oregon 97361	62 35

* Asterisked titles are found in the Short Descriptions section.

° First number refers to the description, others to the classifications.

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
Competencies in Mathematics, Instructional Strategies: Division E. Glenadine Gibb	Research and Development Center for Teacher Education University of Texas Austin, Texas	64 29, 31 41
Competencies in Mathematics, Instructional Strategies: Numeration E. Glenadine Gibb	Research and Development Center for Teacher Education University of Texas Austin, Texas	65 29, 31, 41
Competencies in Mathematics, Mathematics in the Elementary School: An Overview E. Glenadine Gibb	Research and Development Center for Teacher Education University of Texas Austin, Texas	66 29, 41
*Conventional Media Educational Media Laboratories	Technifax Education Division The Plastic Coating Corpora- tion Holvoke, Massachusetts 01040	117
Critical Moments in Teaching (film series) and Guide for Indepen- dent Discussion and Study David Gleissman, editor	Holt, Rinehart and Winston, Inc. 383 Madison Avenue New York, New York 10017	68 35, 45
Developing Effective Instruction	General Programmed Teaching P.O. Box 402, 424 University Avenue Palo Alto, California 94302	70 29, 37, 47
Development of Higher Level Thinking Abilities John A. McCollum and Rose Marie David	Northwest Regional Educational Laboratory 710 S.W. Second Avenue 500 Lindsay Building Portland Oregon 97204	71 21, 25, 29, 31, 37, 41
Discovering New Dimensions in the Teaching Process Greta Morine, Robert Spaulding, Selma Greenberg	Intext Educational Publishers College Division Scranton, Pennsylvania 18515	72 33, 51
The Discovery Teaching Game Paul Twelker and Donald Kohl	Simulation Systems Program Teaching Research Division Oregon State System of Higher Education Monmouth, Oregon 97361	73 35

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
Discovery Teaching Simulation System Paul Twelker	Simulation Systems Program Teaching Research Division Oregon State System of Higher Education Monmouth, Oregon 97361	74 25, 27
Distar Series Englemann-Becker Follow Through Project	Science Research Associates 259 East Erie Street Chicago, Illinois 60611	75 25, 31, 41
Facilitating Inquiry in the Classroom Fred E. Newton, Northwest Regional Educational Laboratory	Copy-Print Centers 1208 S.W. Jefferson Street Portland, Oregon 97201	77 27, 31 41
Films on Cognitive Development Ruth Formanek and Greta Morine	Forward Looking Films RFD #1 State Line, Massachusetts 01261	79 33, 37, 45
*Guided Self-Analysis - Language Development Theodore Parsons	Guided Self-Analysis Profes- sional Development Systems 2140 Shattuck Berkeley, California	117
Guided Self-Analysis: Teaching for Inquiry Theodore Parsons	Guided Self-Analysis Profes- sional Development Systems 2140 Shattuck Berkeley, California 94704	80 33, 51
Human Relations Training Unit Far West Laboratory for Research and Development	Anti-Defamation League 315 Lexington Avenue New York, New York 10016	82 35
Information Units Far West Laboratory for Research and Development	Lockheed Education Systems P.O. Box 504 Sunnyvale, California 94088	83 35
Inner-City Simulation Laboratory Donald Cruickshank	Science Research Associates 259 East Erie Street Chicago, Illinois 60611	84 35
Instructional Design A Self- Directed Learning Program David P. Butts	Research and Development Center for Teacher Education University of Texas Austin, Texas	86 29

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
Intellectual Development of Babies Ruth Formanek and Greta Morine	Forward Looking Films RFD #1 State Line, Massachusetts 01261	87 33,45
Interaction Analysis John H. Hanson and Robert A. Anderson	Northwest Regional Educational Laboratory 710 S.W. Second Avenue 500 Lindsay Building Portland, Oregon 97204	88 33,51
Interpersonal Communications John Wallen	Northwest Regional Educational Laboratory 710 S.W. Second Avenue 500 Lindsay Building Portland, Oregon 97204	90 27, 51
Introduction to Early Childhood Education Verna Hildebrand	The Macmillan Company 866 Third Avenue New York, New York 10022	91 33, 41
Learning Interaction Analysis: A Programmed Approach Miles C. Olson	Educational Consulting Association, Inc. 3311 South Broadway, Suite 304 Englewood, Colorado 80110	92 33, 51
*Meeting Your Cooperating Teacher	Research and Development Center for Teacher Education University of Texas Austin, Texas	118
*Micro-Counseling Allen C. Ivey University of Massachusetts	University of Massachusetts Amherst, Massachusetts	118
Minicourse on Effective Questioning in a Classroom Discussion (Elementary) Far West Laboratory for Research and Development	Macmillan Educational Services, Inc. 8701 Wilshire Boulevard Beverly Hills, California 90211	93 23
Minicourse on Individualizing Instruction in Mathematics Far West Laboratory for Research and Development	Macmillan Educational Services, Inc. 8701 Wilshire Boulevard Beverly Hills, California 90211	94 23, 29 41

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
Minicourse on Organizing the Kindergarten for Independent Learning and Small-Group Instruc- tion Far West Laboratory for Research and Development	Dr. L. Hutchins Far West Laboratory for Research and Development 1 Garden Circle Hotel Claremont Berkeley, California 94705	95 29
Minicourse on Thought and Language: Skills for Teaching the Child With Minimal Language Develop- ment Far West Laboratory for Research and Development	Dr. L. Hutchins Far West Laboratory for Research and Development 1 Garden Circle Hotel Claremont Berkeley, California 94705	96 23, 41
*Models of Teaching: Self-Instructional Modules Bruce Joyce, Marsha Weil, Rhoads Wald	Bruce Joyce Teachers College, Columbia University New York, New York 10027	119
Modifying Classroom Behavior Nancy Backley and Will Walker	Research Press Company Champaign, Illinois 61820	97 31, 45
Mr. Land's 6th Grade (Simulation Films) Bert Kersh	Dean Bert Kersh Oregon College of Education Monmouth, Oregon 97361	98
*Organizational Constraints (Games and Simulations)	Research and Development Center for Teacher Education University of Texas Austin, Texas	120
*Performance-Based Curriculum in Human Relations Allen C. Ivey University of Massachusetts	University of Massachusetts Amherst, Massachusetts	120
*Precision-Teaching: A Tool for the School Counselor and Teacher Ogden R. Lindsley	Ann Duncan Yeshiva University New York, New York	121
*PPIT - Principles and Practice of Instructional Technology	General Programmed Teaching P.O. Box 402 Palo Alto, California 94302	121

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
Professional Decision-Making for Teachers Bert Alfrey, Ron G. Joekel, Alan Seagren University of Nebraska	Nebraska Educational Television Council for Higher Education, Inc. Lincoln, Nebraska 68508	99 35, 49
*Programmed Instruction Educational Media Laboratories	Technifax Education Division The Plastic Coating Corpora- tion Holyoke, Massachusetts 01040	121
The Psychology of Learning and Instruction: Educational Psychology John P. De Cecco	Prentice-Hall Englewood Cliffs, New Jersey	100 45
RUPS: Research Utilizing Problem- Solving Charles Jung, René Pino and Ruth Emory	Copy-Print Centers 1206 S.W. Jefferson Street Portland, Oregon 97201	101 35
*The Sensitivity Training Program Bruce Joyce, David E. Hunt, Harry Schroeder	Bruce Joyce Teachers College, Columbia University 525 West 120th Street New York, New York 10027	122
Social Studies Modules, Making a Living Miss Clyde I. Martin	Research and Development Center for Teacher Education University of Texas Austin, Texas	102 41
Systematic and Objective Analysis of Instruction James R. Hale and R. Allan Spanjer	Northwest Regional Educational Laboratory 710 S.W. Second Avenue 500 Lindsay Building Portland, Oregon 97204	103 27, 51
Teaching Achievement Motivation Alfred S. Alschuler, Diane Tabor, James McIntyre	Education Ventures, Inc. 209 Court Street Middletown, Conn. 06457	104 31, 45
Teaching for Problem-Solving: A Teaching Laboratory Manual Thomas B. Gregory	Research and Development Center for Teacher Education University of Texas Austin, Texas	105 27, 31
Teaching in IPI (Individually Prescribed Instruction) Mathematics	Research for Better Schools 1700 Market Street Philadelphia, Pennsylvania	107 29, 37, 41

<u>Title and Author/Developer</u>	<u>Source</u>	<u>Page</u>
The Teaching of Science: A Self-Directed Learning Program David P. Butts, Gene E. Hall	Research and Development Center for Teacher Education University of Texas Austin, Texas	108 29, 41
Teaching Skills for Elementary and Secondary School Teachers Dwight Allen, Kevin A. Ryan, Robert N. Bush, and James M. Cooper	General Learning Corporation 3 East 54th Street New York, New York 10022	110 21, 23, 25
*Team Teaching in the Elementary School	IDEA Information and Services Division P.O. Box 446 Melbourne, Florida 32901	122
Team Teaching Modules L. Jean York	The Leslie Press 111 Leslie Street Dallas, Texas 75207	112 37, 43, 49
*Techniques of Evaluating Types of Literature Educational Media Laboratories	Technifax Education Division The Plastic Coating Corporation Holyoke, Massachusetts 01040	123
*Training Competency-Based Instructional Personnel	Dr. George Dickson Dean, College of Education University of Toledo Toledo, Ohio 43606	123
Using Tests Intelligently Quentin Stodola	Mr. Donel Price, Director Broadcast Service Center California State College 5151 State College Drive Los Angeles, California 90032	114 37, 45
Vimcet Filmstrip-Tape Programs	Vimcet Associates P.O. Box 24714 Los Angeles, California 90024	115 23, 25, 39, 43

A CLASSIFICATION OF COMPETENCY-ORIENTED MATERIALS
FOR TEACHER EDUCATION

1. Basic Interactive Teaching Skills

General Communication and Presentation Skills
Questioning Skills (Modulating Cognitive Level and General Discussion)
Structuring
Sanctioning
Problem-Solving (Inquiry)
Group Dynamics (Interpersonal Communication Skills)

2. Instructional Planning and Design Skills

3. Teaching Strategies

4. Analysis of Classroom Activities: Observation Guides and Interaction Systems

5. Instructional Decision-making (Problem-solving)

6. Student Diagnosis and Evaluation

7. Content Areas

8. Foundations of Education

9. Media and Instructional Technology

10. Educational Staffing and Instructional Organization

11. Staff Development

BASIC INTERACTIVE TEACHING SKILLS

	Behavioral Status	Objectives	Instructional Format	Administration
	Complete	Need specif. of obj. Need Assessm. Meas. A.M. need refining Need Level of Perf.	Cognitive Demonstrative Consequential Expressive Affective-Psych	Micro-Teaching Simu. Teaching/Roleplay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator
<u>General Communication and Presentation Skills</u>				
1. <u>Basic Teaching Tasks:A Teaching Laboratory Manual for Beginning Teacher Candidates</u> --Clarity of Instructional Objective --Presentation (introducing, organizing, using audio-visual aids, closing, making assignments) --Refocusing	x	x	x	x
2. <u>Teaching Skills-Presentation Skills</u> --Completeness of Communication --Lecturing --Use of Examples --Planned Repetition	x	x	x	x
3. <u>Teaching Skills-Response Repertoire</u> --Verbal Responses --Non-verbal Responses --Combined Verbal and Non-verbal	x	x	x	x
<u>Questioning Skills (Modulating Cognitive Level and General Discussion)</u>				
1. <u>Basic Teaching Tasks:A Teaching Laboratory Manual for Beginning Teacher Candidates</u> --Interaction --Questioning as a classroom strategy	x	x	x	x
2. <u>Development of Higher Level Thinking Abilities</u> --Questioning Strategies and Discussion Skills	x	x	x	x
3. <u>Guided Self-Analysis: Teaching for Inquiry</u>	x	x	x	x

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
	Complete	Need specif. of obj. Need Assessm. Meas. A.M. need refining Need Level of Perf.	Cognitive Demonstrative Consequential Expressive Affective-Psych	Micro-Teaching Simu. Teaching/Roleplay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator
4. <u>Minicourse on Effective Questioning in a Classroom Discussion (Elementary)</u>		x	x	x
5. <u>Minicourse on Effective Questioning in a Classroom Discussion (Secondary)</u>		x	x	x
6. <u>Minicourse on Individualizing Instruction in Mathematics</u>		x	x	x
7. <u>Minicourse on Thought and Language: Skills for Teaching the Child With Minimal Language Development</u>		x	x	x
8. <u>Teaching Skills-Questioning Skills (Secondary)</u> --Fluency in Asking Questions --Probing Questions --Higher Order Questions --Divergent Questions	x	x x	x	x x
9. <u>Teaching Skills-Questioning Skills (Elementary)</u>	x	x x	x	x x
<u>Structuring</u>				
1. <u>Guided Self-Analysis: Teaching for Inquiry</u>	x	x	x	x x
2. <u>Minicourse on Individualizing Instruction in Mathematics</u>		x	x	x
3. <u>Teaching Skills-Creating Student Involvement</u> --Set Induction --Closure	x	x x	x	x x
4. <u>Vimcet Filmstrip-Tape Program #6 (Set Induction)</u>	x		x	x

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
	Complete	Need specif. of obj. Need Assessm. Meas. A.M. need refining Need Level of Perf.	Cognitive Demonstrative Consequential Expressive Affective-Psych	Micro-Teaching Simu. Teaching/Rolenlay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator
Sanctioning (Reinforcement)				
1. <u>Basic Teaching Tasks: A Teaching Laboratory Manual for Beginning Teacher Candidates</u> --Interaction	x	x x	x	x
2. <u>Discovery Teaching Simulation System, Phase II</u> --Indirect Guidance and Encouragement --Reinforcement of Exploration		x x	x	x
3. <u>Distar Series: Training Teachers and Paraprofessionals in Englemann-Becker Follow-Through Classrooms</u>	x	x x	x x x	x
4. <u>Guided Self-Analysis: Teaching for Inquiry</u>	x	x	x x	x x x
5. <u>Teaching Skills-Increasing Student Participation</u> --Reinforcement --Recognizing Attending Behavior --Silence and Non-verbal Cues --Cueing	x	x x	x	x x
6. Vimcet Filmstrip-Tape Programs #12 Knowledge of Results #15 Discipline in the Classroom (Beh. Mod.)	x		x	x x
Problem-solving (Inquiry)				
1. <u>Development of Higher Level Thinking Abilities</u> --Interpretation of Data --Application of Knowledge	x	x	x x x	x

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
	Complete	Need specif. of obj. Need Assessm. Yeas. A.M. need refining Need Level of Perf.	Cognitive Demonstrative Consequential Expressive Affective-Psych	Micro-Teaching Simu. Teaching/Rolenlay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator
2. <u>Discovery Teaching Simulation System, Phase I; Phase II</u> --Focusing on the Problem --Springboards	x	x	x	x
3. <u>Facilitating Inquiry in the Classroom</u>		x	x	x
4. <u>Guided Self-Analysis: Teaching for Inquiry</u>	x	x	x	x
5. <u>Teaching for Problem Solving: A Teaching Laboratory Manual</u> --Creating Incongruity: Presenting the Problem --Attacking Incongruity: Formulating Hypotheses		x	x	x
<u>Group Dynamics (Interpersonal Communication Skills)</u>				
1. <u>Interpersonal Communications</u>		x	x	x
2. <u>Systematic and Objective Analysis of Instruction (Phase One)</u>		x	x	x

INSTRUCTIONAL PLANNING AND DESIGN SKILLS

Categories:

1. Determining Instructional Objectives
2. Instructional Activities (deriving content and planning lessons)
3. Appraisal and Assessment
4. Individualizing for Instruction
5. Grouping

1. Basic Teaching Tasks: A Teaching Laboratory Manual for Beginning Teacher Candidates
--Clarity of instructional objectives (1,2)
2. Competencies in Mathematics (1,2,3)
3. Developing Effective Instruction (1,2,3)
4. Development of Higher Level Thinking Abilities (1,2)
5. Instructional Design: A Self-Directed Learning Program (1,2,3)
6. Minicourse on Individualizing Instruction in Mathematics (1,2,3,4)
7. Minicourse on Organizing the Primary Classroom for Independent Learning and Small Group Instruction (4,5)
8. Teaching in IPI Mathematics, Vols. One and Two (4)
9. The Teaching of Science: A Self-Directed Learning Program (Instructional Design for Science Teaching) (2,3)

Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
Complete			
x	Need specif. of obj.		
	Need Assessm. Meas.		
x	A.M. need refining		
x	Need Level of Perf.		
	Cognitive		
	Demonstrative		
	Consequential		
	Expressive		
	Affective-Psych		
	Micro-Teaching		
	Simu. Teaching/Roleplay		
	Group Discussion		
	Observ-Writing		
	Reading-Writing		
	Self-Ad (Indiv)		
	Self-Ad (Groun)		
	Instructor		
	Coordinator		

--Modules IV (5)

#8 (2) #17 (2)



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TEACHING STRATEGIES

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
	Complete	Need specif. of obj. Need Assessm. Yeas. A.M. need refining Need Level of Perf. Cognitive Demonstrative Consequential Expressive Affective-Psych Micro-Teaching Simu. Teaching/Rolenplay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator		
1. <u>The Basic Course: Teaching is Learning to Listen; and Activities in Metaphor</u>	x	x	x	x
2. <u>Basic Teaching Tasks: A Teaching Laboratory Manual for Beginning Teacher Candidates</u> --Presentation (The active lecture)	x	x x	x	x
3. <u>Competencies in Mathematics</u> --Instructional Strategies: Division --Instructional Strategies: Numeration		x		x
4. <u>Development of Higher Level Thinking Abilities</u>	x	x	x x x	x
5. <u>Distar Series: Training Teachers and Paraprofessionals in Englemann-Becker Follow-Through Classrooms</u>	x	x x	x x x	x
6. <u>Facilitating Inquiry in the Classroom</u>		x	x	x
7. <u>Modifying Classroom Behavior</u>	x	x		x
8. <u>Teaching Achievement Motivation</u>	x		x x	x
9. <u>Teaching for Problem-Solving: A Teaching Laboratory Manual</u>		x x	x	x

**ANALYSIS OF CLASSROOM ACTIVITIES:
OBSERVATION GUIDES AND INTERACTION SYSTEMS**

OBSERVATION GUIDES AND INTERACTION SYSTEMS											Instructional		Admini-						
	Behavioral	Objectives					Format		stration										
	Status																		
	Complete	Need specif. of obj.	Need Assessm. Meas.	A.M. need refining	Need Level of Perf.	Cognitive	Demonstrative	Consequential	Expressive	Affective-Psych	Micro-Teaching	Simu. Teaching/Roleplay	Group Discussion	Observ-Writing	Reading-Writing	Self-Ad (Indiv)	Self-Ad (Group)	Instructor	Coordinator
Categories:																			
1. Comprehensive Pupil-Teacher Interaction Patterns																			
2. Pupil-Teacher Interaction: Socio-Emotional Climate																			
3. Teacher Questioning Patterns																			
4. Teacher Response Patterns																			
5. Child Behavior Patterns																			
6. Teaching Strategy																			
7. General Observation Guide																			
8. Levels of Thinking																			
1. <u>Analysis of Teaching Behavior (Science Teaching) (1,2)</u>		x	x	x	x	x					x	x						x	
2. <u>Classroom Behavior Analysis and Treatment (5,4)</u>	x	x	x	x	x	x	x						x					x	
3. <u>Discovering New Dimensions in the Teaching Process (1,3,4,6,8)</u>	x			x	x	x	x				x		x			x		x	
4. <u>Films on Cognitive Development (5)</u>	x		x	x	x	x							x				x	x	
5. <u>Guided Self-Analysis: Teaching for Inquiry (3,4,1,8)</u>	x			x	x	x	x				x		x	x		x	x	x	x
6. <u>Intellectual Development of Babies (5)</u>	x	x		x	x	x							x			x		x	
7. <u>Interaction Analysis (2)</u>				x			x							x				x	
8. <u>Introduction to Early Childhood Education (7)</u>		x		x	x	x			x					x		x	x		
9. <u>Learning Interaction Analysis: A Programmed Approach (2)</u>	x			x	x	x								x		x			

INSTRUCTIONAL DECISION-MAKING
(Problem-solving)

Categories:	Behavioral		Objectives					Instructional		Admini-	
	Status							Format		stration	
1. Human Relations		Complete	Need specif. of obl.	Need Assessm. Meas.	A.M. need refining	Need Level of Perf.	Cognitive	Demonstrative	Consequential	Expressive	Affective-Psych
2. Teaching Style, Skill or Methods											
3. Students with Academic Problems											
4. Students with Personal Difficulties											
5. Cultural Conflict											
6. Grading											
7. Classroom Organization											
8. Classroom Management											
9. Educational Staffing and School Organization											
10. School/Community Relations											
11. Curriculum											
1. <u>Classroom Management Simulation System (8)</u>					x		x				
2. <u>Critical Moments in Teaching (1,2,3,4,5,6,7,8)</u>		x	x		x		x				
3. <u>The Discovery Teaching Game (2)</u>		x					x				
4. <u>Human Relations Training Unit (1,5,7,8,10--particularly oriented toward inner city)</u>		x	x		x			x	x		
5. <u>Information Units (11)</u>		x	x		x		x			x	x
6. <u>Inner-City Simulation Laboratory (1,2,3,4,5,7,8,10)</u>		x		x	x		x		x		x
7. <u>Professional Decision-making for Teachers (1,2,3,6,8,10)</u>		x	x		x		x			x	
8. <u>RUPS: Research Utilizing Problem-Solving (7,8)</u>					x		x	x			

STUDENT DIAGNOSIS AND EVALUATION

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
	Complete	Need specif. of obj. Need Assessm. Meas. A.M. need refining Need Level of Perf. Cognitive Demonstrative Consequential Expressive Affective-Psych Micro-Teaching Simu. Teaching/Roleplay Group Discussion Observ-Writing Reading-Writing Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator		
1. <u>Classroom Behavior Analysis and Treatment</u>	x	x	x	x
2. <u>Competencies in Mathematics-</u> <u>"Assessing Student Behavior"</u>	x	x	x	x
3. <u>Competencies in Mathematics-</u> <u>"Diagnosing Student Difficulties"</u>	x	x	x	x
4. <u>Developing Effective Instruction</u> --Criterion Tests --Determining Entry Level --Entry Level --Tests --Validation	x	x	x	x
5. <u>Development of Higher Level Thinking Abilities</u> --Concept Diagnosis	x	x	x	x
6. <u>Films on Cognitive Development</u>	x	x	x	x
7. <u>Teaching in IPI Mathematics</u> --Vol. 3: Diagnosing Student Achievement --Vols. 4,5,6: Developing Prescriptions--Three Cases	x	x	x	x
8. <u>Team Teaching Modules</u> --Module VI: Evaluation of Team Teaching and Children's Continuous Progress, Team Teaching Modules	x	x	x	x
9. <u>Using Tests Intelligently</u>	x	x	x	x

10. Vimcet Filmstrip-Tape Programs
- #2 Systematic Instructional Decision-Making
 - #7 Evaluation
 - #16 Modern Measurement Methods
 - #18 Experimental Design for School Research

Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
x	Complete		
	Need specif. of obj.		
	Need Assessm. Meas.		
	A.M. need refining		
	Need Level of Perf.		
x	Cognitive		
	Demonstrative		
	Consequential		
	Expressive		
	Affective-Psych		
		Micro-Teaching	
		Simu. Teaching/Roleplay	
		Group Discussion	
		x Observ-Writing	
		Reading-Writing	
x		Self-Ad (Indiv)	
x		Self-Ad (Group)	
		Instructor	
		Coordinator	

CONTENT AREAS

	Behavioral Status	Objectives	Instruc- tional Format	Admini- stration	
	Complete	Need specif. of obj. Need Assessm. Meas. A.M. need refining Need Level of Perf.	Cognitive Demonstrative Consequential Expressive Affective-Psych	Micro-Teaching Simu. Teaching/Roleplay Group Discussion Observ-Writing Reading-Writing	Self-Ad (Indiv) Self-Ad (Group) Instructor Coordinator
1. <u>Competencies in Mathematics</u>		x	x		x
2. <u>Development of Higher Level Thinking Abilities</u> --Social Studies	x	x	x	x x x	x
3. <u>Distar Series: Training Teachers and Paraprofessionals in Englemann-Becker Follow-Through Classrooms</u> --Reading --Language --Mathematics	x	x x	x x	x x x	x
4. <u>Facilitating Inquiry in the Classroom (Science)</u>		x	x	x	x
5. <u>Introduction to Early Childhood Education: A Laboratory Workbook</u>		x x	x	x	x x
6. <u>Minicourse on Individualizing Instruction in Mathematics</u>		x	x x	x x	x
7. <u>Minicourse on Thought and Language: Skills for Teaching the Child with Minimal Language Development</u>		x	x x	x x	x
8. <u>Social Studies Modules, Making a Living</u>	x	x x	x	x x	x
9. <u>Teaching in IPI Mathematics</u>	x		x	x	x
10. <u>The Teaching of Science: A Self-Directed Learning Program</u>	x		x	x x	x x

FOUNDATIONS OF EDUCATION

Psychology (Educational Psychology, Child Development)

1. Critical Moments in Teaching and Guide for Independent Discussion and Study
2. Disiar Series: Training Teachers and Paraprofessionals in Englemann-Becker Follow-Through Classrooms
3. Films on Cognitive Development
4. Intellectual Development of Babies
5. Modifying Classroom Behavior
6. Teaching Achievement Motivation
7. Using Tests Intelligently
8. The Psychology of Learning and Instruction: Educational Psychology

Behavioral Status	Objectives	Instructional Format	Administration
Complete	Need specif. of obj.	Need Assessm. Meas.	A.M. need refining
	Need Level of Perf.	Cognitive	Demonstrative
	Consequential	Expressive	Affective-Psych
	Micro-Teaching	Simu. Teaching/Rolenlay	Group Discussion
	Observ-Writing	Reading-Writing	Self-Ad (Indiv)
	Self-Ad (Group)	Instructor	Coordinator

MEDIA AND INSTRUCTIONAL TECHNOLOGY

1. Cameras in Education

2. Developing Effective Instruction --Development and administration of programmed materials

Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
Complete			
x	Need specif. of obj.		
x	Need Assessm. Meas.		
x	A.M. need refining		
x	Need Level of Perf.		
	Cognitive		
x	Demonstrative		
	Consequential		
	Expressive		
	Affective-Psych		
	Micro-Teaching		
	Simu. Teaching/Rolenlay		
	Group Discussion		
	Observ-Writing		
	Reading-Writing		
	Self-Ad (Indiv)		
	Self-Ad (Group)		
	Instructor		
	Coordinator		

EDUCATIONAL STAFFING AND INSTRUCTIONAL ORGANIZATION

1. Professional Decision-Making for Teachers
2. Team Teaching Modules

Behavioral Status	Objectives	Instruc- tional Format	Admini- stration
Complete			
x	Need specif. of obj.		
x	Need Assessm. Meas.		
	A.M. need refining		
x	Need Level of Perf.		
	Cognitive		
	Demonstrative		
	Consequential		
	Expressive		
	Affective-Psych		
	Micro-Teaching		
	Simu. Teaching/Rolenlav		
	Group Discussion	x	
	Observ-Writing		
	Reading-Writing	x	
	Self-Ad (Indiv)		x
	Self-Ad (Group)	x	
	Instructor		
	Coordinator		

STAFF DEVELOPMENT

Categories:

1. General Interpersonal Skills
2. Supervisory Skills

1.	<u>Analysis of Teaching Behavior</u>	(2)	x	x	x				x	x			x
2.	<u>The Assessment Training Kit</u>		x	x	x	x					x	x	
3.	<u>Classroom Behavior Analysis and Treatment</u>	(2)	x	x	x	x	x			x			x
4.	<u>Discovering New Dimensions in the Teaching Process</u>		x		x	x	x		x		x		x
5.	<u>Guided Self-Analysis: Teaching for Inquiry</u>	(2)	x		x		x		x		x		x
6.	<u>Interaction Analysis</u>	(2)			x		x			x			x
7.	<u>Interpersonal Communications</u>	(1)			x	x	x			x		x	
8.	<u>Learning Interaction Analysis: A Programmed Approach</u>	(2)	x		x	x				x		x	
9.	<u>Systematic and Objective Analysis of Instruction</u>	(2)			x	x	x			x	x	x	x

DESCRIPTIONS OF PREVIEWED MATERIALS

Title: Analysis of Teaching Behavior
Author: Gene E. Hall
Source: Research and Development Center for Teacher Education
The University of Texas
Austin, Texas
Cost: Consult Source
Materials: Audio-tape, instructor's manual (includes printed material
to be duplicated or made into transparencies)

Description:

This module trains teachers to use the IAST (Instrument for the Analysis of Science Teaching) System of interaction analysis to analyze their own teaching behavior while teaching and to be more aware of their prospective behaviors when planning for teaching. The IAST System is similar to the Flanders Interaction Analysis scheme in its emphasis on the socio-emotional climate but includes additional categories, fourteen in all. It is a general category system applicable to all subject areas.

The instructional activities include: taping a short lesson, analyzing tapescript using the IAST category system, constructing and interpreting a matrix, practice coding sessions, constructing and interpreting ratios. The materials are designed to be used on a teacher-directed group basis; however, individual "packets" could be put together for independent, self-instructional use. The manual includes the instructor's directions for each activity as well as the support materials to be duplicated or made into transparencies. The estimated time for the entire module is:

Planning for Instruction	Approx. 3 hours
Teaching	3.5-5 hours
Pre-Appraisal	5 minutes
Introduction and Activity 1	60-90 minutes
Activity 2	40-50 minutes
Activity 3	20-30 minutes
Activity 4	20-30 minutes
Activity 5	15-25 minutes
Practice Sessions	10-15 minutes each

Activities:

At the beginning and end of the module activities students tape-record a short lesson for which the objectives and materials have been supplied. The remaining activities, such as learning the coding system, practice coding, constructing matrices, are completed on an instructor-directed group-discussion basis.

Analysis of Teaching Behavior

Objectives and Criterion Assessment:

The performance objectives are stated at the beginning of the module: however, no assessment or level of performance measures are provided. The implicit performance level appears to be familiarity through practice.

Uses in Teacher Education Programs:

This module is applicable to clinical experiences connected with student teaching and to methods courses, especially science.

Title: The Assessment Training Kit
Authors: C. Lisa Lewis and S.L. Menaker
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas

Cost: Consult Source
Materials: Six manuals

Description:

These manuals are designed to train counselors in the analysis of five different instruments and in forming a relevant and meaningful description. The Assessment Report (sixth manual) provides a method of integrating the data from the reports into four major personality characteristics -- Self-Characteristics, Interpersonal Relations, Areas of Anxiety, and Teaching Relevant Characteristics. The five instruments include the Autobiographical Form, the Adjective Self-Description, the Self-Report Inventory, the Test of Directed Imagination, and the One-Word Sentence Completion.

The material in the manual includes sample tests, interpretations, complete reports, case studies.

Activities:

Students complete the written exercises in the manual including analysis of completed tests and assessment write-ups of case studies.

Objectives and Criterion Assessment:

The objectives are not stated but the implicit objective is skill in interpreting five personality tests and in structuring these data into an assessment report. The criterion measures are part of the exercises. Results can be compared to the Staff Counselor's reports but no formal assessment measures are provided nor is a level of performance specified.

Uses in Teacher Education Programs:

This program may be used in conjunction with participant supervisory, counseling, psychological assessment activities. However, the program is intended only for persons with a background in counseling psychology.

Title: 1. The Basic Course: Teaching is Learning to Listen
2. Activities in Metaphor

Author: W.J.J. Gordon and Tony Poze

Publisher: Synectics Education Systems
121 Brattle Street
Cambridge, Massachusetts 02138

Costs: \$50.00

Materials: Two paperback books.

Description:

The two books can be used independently or in conjunction with one another. The major emphasis for both books is the development of the teacher's ability to use metaphoric activity in application with learners. The materials are designed as self-instructional.

1. The Basic Course: Teaching is Learning to Listen is described as a programmed teacher training course. The objective of the course is the development of teaching skill for the utilization of metaphoric activity for creativity and problem solving. The teacher "learning to listen" refers to the acceptance of learners' feelings and ideas, an attitude of caring about the learner and the ability to understand the thinking processes and kinds of connections necessary for metaphoric activity. There is a short introduction to Synectics theory followed by practice exercises and problem solving units for teachers and learners.

2. Activities In Metaphor is a compilation of activities for students based on metaphoric activity developed in the Basic Course. These activities are game-like and are developed in step-by-step detail. All of the activities are developed in terms of goals and processes. Examples of activities and their labels are: Answer Sharing, Metaphorically Based Twenty Questions, Matching Pictures, Helen Keller, Charades Based on an Analogy, The Fly's Eye, and The Way It Might Have Happened. Some of the activities lead to others; for example, The Charades Game may lead to theater exercises, improvisation and dramatic production. Many of the activities are connected to specific content areas such as art, music, science and math.

Activities:

1. The Basic Course: Teaching is Learning to Listen: The exercises and units are developed in a step-by-step fashion and space is allotted for the individual to practice the exercises on the pages of the book in workbook fashion. Activities begin with practice exercises that can be done by the teacher and students. The practice exercises consist of simple comparisons, analysis of comparisons, direct analogy, exercises in metaphorical strain, personal analogy, asking evocative questions, compressed conflicts and problem-solving. These exercises are related to Making the Familiar Strange and Making the Strange Familiar, two processes for understanding concepts and problem solving.

2. Activities In Metaphor: Directions for the metaphoric games are defined as above. The goals of each activity are briefly discussed and then the process is developed for the teacher to carry out with students. There are "Hints and Variations" for each activity.

The Basic Course: Teaching is Learning to Listen, Activities in Metaphor

Objectives and Criterion Assessment:

1. The Basic Course: Teaching is Learning to Listen: Although the material is described as programmed, there is no self-correctional or feedback system developed in the material. Assessment is not formalized. However, it is possible and feasible to use the evaluative procedures of exercises in metaphorical strain, levels of involvement in personal analogies, and the development of evocative questioning techniques to build assessment exercises.

2. Activities in Metaphor: The assessment exercises that may be developed for The Basic Course can also be used with this material.

Uses in Teacher Education Programs:

Both materials, The Basic Course and Activities in Metaphor, can be used in pre-service and/or in-service teacher education programs as the development of instructional strategies. The materials may be used with children and with adults as problem-solving techniques. It is possible to relate the materials to particular content areas and they can be used in specific method courses.

Title: Basic Teaching Tasks: A Teaching Laboratory Manual for
Beginning Teacher Candidates
Author: G.L. Davis, Thomas B. Gregory, Marcella L. Kyselka, Kevin
R. Morse, B.R. Smoot
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult Source
Materials: Laboratory manual, audio- or video-tape facilities

Description:

The manual provides instructions, teaching tasks and feedback guidelines for developing interactive teaching skills in simulated teaching situations. Each teaching task focuses on one type of teaching skills which has been described and analyzed into its component elements or subskills. The skills include: Clarity of Instructional Objectives, Presentation (lecturing skills), Interaction (discussion skills of questioning, reinforcement and silence); Refocussing (Specific Refocussing Skills, e.g., gestures, verbal directions, etc., and General Refocussing Skills, e.g., creating a novel environment, changing the activity structure); Questioning as a Classroom Strategy (producing more and different types of questions, e.g., eliciting, open/closed, cognitive/affective, procedural; modulating the cognitive level of questions).

Activities:

Students read the manual describing the teaching skills cluster and prepare a short peer-teaching lesson (5-20 minutes). The lesson is video- or audio-taped; colleagues act as observers and evaluators using the Listening/Viewing Guide and Evaluation Guide.

Objectives and Criterion Assessment:

The specificity of objectives and criterion measures varies with each task. Except for the last unit, Questioning as a Classroom Strategy, the objectives and criterion measures are very general and no level of performance is specified. The implicit objective is to develop and practice the teaching skills described in each task. In the Unit on Questioning, more refined measures are used and the performance level is self-selected. For many of the tasks it would be useful to develop or to apply some of the available interaction analysis systems in order to have more objective assessment measures.

Uses in Teacher Education Programs:

This program is applicable to clinical experiences in connection with student teaching or methods courses. It can be used on a self-administering basis and requires at least three teacher candidates as participants.

Title: Cameras in Education

Author or Developer:

 Educational Media Laboratories

Publisher or Source:

 Technifax Education Division

 The Plastic Coating Corporation

 Holyoke, Massachusetts 01040

Special Ordering Instructions:

 Catalog No. 73804-100

Costs:	Complete Set	\$135.00
	Transparencies	50.00
	4 Filmstrips and 4 tapes	50.00
	Instructor's Handbook	3.50
	Student Manuals (15)	30.00

Materials: See 'Costs'

Description:

This series is concerned with the educational application of photography for teachers. Its major emphasis is development of compositional skills and planning skills for instructional use in the classroom primarily in the form of planning slide unit productions for and with children. These are treated similarly to lesson or unit planning with a concern for selecting objectives appropriate to the slide production format and for designing the instructional unit to achieve these objectives. Other uses such as the preparation of text and supplemental material, poster-making and art work are also considered.

The series is designed as a four or five day workshop. However, augmented by demonstration and discussion materials that are called for in the workshop design, but not provided, the materials may easily be adopted as a guide for self-instructional use, probably in small groups, and could be completed in four or five hour-length sessions, excluding the teacher's time for planning and preparing the production unit. There are four components in this series:

- 1) Four filmstrips accompanied by an audio-tape commentary (3-3/4 ips)
 -Basic composition
 -Planning Slide Units including lesson objectives, developing sequence, and final presentation
 -Using Simple Cartridge Load Cameras
 -Instructional Application
- 2) Instructor's Manual
 -Contains suggested course outline, time sequence, equipment, and materials for setting up an inservice workshop as well as a complete student's manual
- 3) Student's Manual
 -Explains how to use the camera, writing storyboards, editing, and pacing the presentation. Topics include Composition; Setting Educational Objectives; Using the Camera; Instructional Applications: Going a Step Further; Equipment and Material Success; Bibliography

Cameras in Education

4) Review Projectuals (Overhead Transparencies)

....Designed for a quick review of sections and/or greater depth regarding basic elements of photo composition and camera terminology.

Activities:

According to the suggested workshop outline, the student views several of the filmstrips, engages in group discussion over their content, and then reads the corresponding sections in the Student's Manual. Next he is taken through a series of preliminary practice exercises- designing a slide unit, storyboarding and scripting - before actually commencing shooting activities. Participants are given opportunities to carry out and critique their projects.

Objectives and Criterion Assessment:

There are no stated behavioral objectives, but the implicit objective is application of the particular skill of developing a slide production unit. No assessment criterion is provided and no level of proficiency is indicated. However, individual programs using these materials could easily establish their own objectives and criterion measures. Augmented with demonstration and directional materials, this can be used on a self-instructional basis, optimally in a group format.

Uses in Teacher Education Programs:

The series could be used in connection with laboratory or student-teaching experiences or integrated into methods courses in many subject areas, ie, science, mathematics and social studies. It might also be used in more specialized courses in educational technology. The materials seem conceptually thin in the area of instructional planning and design. It is suggested that other programs stronger in the area of selecting educational objectives and designing appropriate instruction, for example, could augment and should precede this program. Cameras in Education is useful as an introduction to photography and its applications in the classroom. The filmstrip and projectuals in the Units on Basic Composition and Using Simple Cartridge Load Cameras may even be used by the teacher with his or her students.

Title: Classroom Behavior Analysis and Treatment
Developer: Robert L. Spaulding
Publisher or Source: Dr. Robert L. Spaulding
Director, Child Development Institute
San Jose State College
San Jose, California 95114

Cost: \$3.50 plus postage

Materials: Book

General Description:

This book reports on a comprehensive system for measuring transactional behavior of children and teachers in classroom settings. It can help students to apply information about behavior modification techniques by providing them with a means of assessing behavioral styles and behavioral changes. Chapter titles include: The Coping Analysis Schedule for Educational Settings (C.A.S.E.S.); The Spaulding Teacher Activity Rating Schedule (S.T.A.R.S.); Using CASES and STARS Together to Measure Transaction; Using CASES or STARS in Teacher Training; Using CASES Categories to Measure Change Toward Behavioral Objectives; Designing a School Management System to Permit Treatment Scheduled by CASES style; Data Gathering Procedures using CASES and STARS.

Activities:

Students will read explanations of coding systems, then use them to observe behavior of children and teachers. After devising a treatment schedule for a particular child students may use the schedule and study behavioral changes.

Objectives and Criterion Assessment:

Behavioral objectives implicit in this material are that the student learn to categorize, analyze, and change behavior of children in classroom settings. No criterion measures are provided.

Uses in Teacher Education Programs:

This material is designed for group instruction. It can be used in connection with courses in child development or with laboratory or student-teaching experiences.

Title of Materials: Classroom Management Simulation System
Author or Developer: Paul Twelker
Publisher or Source: Simulation Systems Program
Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon 97361

Special ordering instructions: Instructors Manual and Student Manuals can be purchased and reproduced by purchaser. Slides and tapes which are used with the manuals can be rented and reproduced by the renter. All material is in the public domain.

Cost: Manuals - Instructor's - \$3; Students' - \$1.
Media - (two-month rental)

Phase I - 35 MM slide-tape - \$46
Phase II - 16 MM film - \$70
(plus postage and \$15 handling charge)

Materials: printed instructor's manual and three student manuals; 7 carousels of slides to be used with manuals; 7 audio tapes to accompany slides; 8 mm or 16 mm films.

General Description:

One student manual provides information on the school, the community, and the class of fifth grade children with whom the simulation exercises deal. Two student manuals present simulation exercises dealing with: The Three Major Teaching Roles; Norm Setting; Dealing with Disruptions; Daily Incidents (The Reading Circle, Going to Recess, Class Discussion, The Study Period, Science Committees, Before Class, The Debate, Rainy Day Lunch Period, Science Research Period, Art).

Activities:

Students view slides and listen to accompanying audio tapes. Periodically they read information or do written exercises in the manuals relating to what they have seen and heard.

Objectives and Criterion Assessment:

Specific behavioral objectives are stated for each section of the student manuals. Each exercise is followed by a statement of correct answers, in a programmed text book style. At the end of the manual an extensive "review and self-evaluation" is provided. This could be used as a criterion measure.

Classroom Management Simulation System

Uses in Teacher Education Programs:

These materials can be self-administered or used in small groups with an instructor. They can be used in connection with laboratory and student-teaching experiences, or as a supplement to a variety of methods courses.

Title: Competencies in Mathematics, Instructional Strategies: Division
Author: E. Glenadine Gibb
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult Source
Materials: mimeographed manual

Description:

Competencies in Mathematics is a series of instructional modules dealing with the development of various competencies necessary to the teaching of elementary mathematics. The seven modules (manuals) are: Mathematics in the Elementary School: An Overview; Instructional Strategies: Numeration; Instructional Strategies: Division; Concept of Numbers; Creative Problem Solving; Diagnosing Student Difficulties; Assessing Student Behavior.

The purpose of this module is to assist the teacher in 1) developing the children's understanding of division based on situations in the physical world; 2) the development of several computational procedures for finding the quotient of two numbers; 3) the selection of appropriate learning activities for division; 4) recognizing different levels of skill and 5) diagnosing learning difficulties in mathematics and selecting appropriate remediation.

These objectives are embodied in four written instructional tasks: Motivating a Need for Division, Developing a Division Algorithm, Levels of Skill in Division Computation, Diagnosis of Difficulties and Remediation. Each instructional task also has a pre-assessment task, a discussion of the pre-assessment task and a post-assessment task. The materials are designed for use on an independent, self-instructional basis. Answer sheets and Answers are provided.

Activities:

All tasks are written. Students complete the pre-assessment task for each instructional task, checking their answers on the discussion of pre-assessment tasks. Depending on their score, they proceed to the instructional task itself or go right on to the post-assessment tasks. The post-assessment tasks are handed into the instructor for grading. Further work, if necessary, may include teaching from the suggested reference and with the instructor or with peers.

Objectives and Criterion Assessment:

The objectives of the module are specified in the introduction. Each task is accompanied by objective pre-assessment and post-assessment measures. No level of performance is specified for the post-assessment task: presumably this is up to the individual instructor. Because the material in the instructional tasks and assessment measures is primarily objective, performance levels can be readily specified.

Uses in Teacher Education Programs:

This module is applicable to mathematics methods courses and activities related to student teaching.

Title: Competencies in Mathematics, Instructional Strategies: Numeration
Author: E. Glennine Gibb
Publisher: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult source
Materials: mimeographed manual

Description:

Competencies in Mathematics is a series of instructional modules dealing with the development of various competencies necessary to the teaching of elementary mathematics. The seven modules (manuals) are: Mathematics in the Elementary School: An Overview: Instructional Strategies: Numeration: Instructional Strategies: Division: Concept of Numbers: Creative Problem Solving: Diagnosing Student Difficulties: Assessing Student Behavior.

This module has as its objectives the understanding of the characteristics of a system of numeration, in this case the decimal system, and the ability to identify learning tasks and select materials characteristic of those understandings; classification of learning activities according to their objectives; and identification of tasks for assessing children's understanding of numeration. The module consists of four written instructional tasks: Characteristics of the Numeration System; Objectives and Activities; Selection of Materials for Developing Understanding of Base Ten Numeration System; Assessing Student (child) Understanding of Numeration. Each task has four parts--a pre-assessment exercise, discussion of pre-assessment exercise, the instructional task and post-assessment exercises.

Activities:

Students work on the pre-assessment task for one of the four objectives. If their score is satisfactory, they may go on to the post-assessment task for that objective. If not, students continue with the instructional task and then complete the post-assessment. The post-assessment task is turned into the instructor for grading. If necessary, further study of the suggested readings or discussion with peers or instructor may be recommended. Otherwise, the work in this module is written, self-administered and independent.

Objectives and Assessment:

The objective of each instructional task is stated and objective criterion measures are provided. The Post-Assessment Task does not specify a level of performance but this can be added.

Uses in Teacher Education Programs:

This material is applicable to mathematics methods courses and to activities in connection with student teaching.

Title: Competencies in Mathematics,
Mathematics in the Elementary School: An Overview
Author: E. Glenadine Gibb
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: consult source
Materials: Mimeographed manual

Description:

Competencies in Mathematics is a series of instructional modules dealing with the development of various competencies necessary to the teaching of elementary mathematics. The seven modules (manuals) are: Mathematics in the Elementary School: an overview; Instructional Strategies: numeration; Instructional Strategies: division; Concept of Numbers; Creative Problem Solving; Diagnosing Student Difficulties; Assessing Student Behavior.

This manual is designed to familiarize the teacher with the mathematical concepts and skills of elementary school mathematics, to understand the sequence of development based on the structure of mathematics and to develop the instruction design skill of sequencing. The manual consists of eleven problem-sets and a pre-assessment and post-assessment exercise. Each problem-set presents problems which illustrate a mathematical concept and asks the teacher-candidate to identify the appropriate sequence for the problems.

The problem-sets include: Numeration, Rational Numbers; Addition and Sets of Numbers; Subtraction and Sets of Numbers; Multiplication and Sets of Numbers; Division and Sets of Numbers; Computation -- the process of addition, subtraction, multiplication, and division; Ideas of Non-Metric and Metric Geometry; Pre-Assessment and Post-Assessment. Each problem-set has a discussion of the concept and sequencing task.

Activities:

Students work through the written exercises first completing the Pre-Assessment Measure for each problem-set and then, depending on that score, going on to the corresponding problem-set exercise or to the Post-Assessment for that problem-set. It is recommended that each task problem-set, is followed by a teacher-guided discussion of the particular concept. However, teacher candidates could work through the problem sets on an individual, self-administered basis. The eleven exercise and assessment measures require about two hours to complete.

Behavioral Objectives and Criterion Assessment:

The general objectives of the module are stated at the outset; however, the implicit objective of each problem-set is mastery in ordering the problems related to the mathematical concepts. Objective assessment measures are provided though no level of performance is specified.

Competencies in Mathematics,
Mathematics in the Elementary School: An Overview

Uses in Teacher Education Programs:

This program is applicable to mathematics methods courses and to student-teaching experiences.

Title: Critical Moments in Teaching (film series) and
Guide for Independent Discussion and Study
Author: David Gleissman, editor
Publisher for the discussion guide:
Holt, Rinehart and Winston, Inc.
383 Madison Avenue
New York, New York 10017
Source for films:
New York University Film Library
26 Washington Place
New York, New York 10003
Cost: Discussion guide (third edition) \$5.10
The sixteen films range in price from \$1.00 to \$150; they are
also available on a rental basis. \$10.00 first day and \$5.00
each additional day. Soon to be available on a rental basis
from Holt, Rinehart and Winston.
Materials: Films and guidebook for discussion

Description:

The films and Guide confront the student with various teaching problems and provide guided decision-making experiences with respect to them. The Guide is a set of questions and references in which the student is asked to analyze, interpret and formulate solutions to problems. In some cases, he is asked to act upon his decisions and receives feedback on the result of his actions.

A primary objective of this series is to teach basic psychological concepts (i.e., group norm, motivation, self concept). Hence, the framework for interpreting the films is largely psychological. However, other dimensions of the educational environment, e.g., objectives, classroom organization, curriculum decisions, and teaching strategies, which impinge on these complex problems are also considered. (The questions in the Guide are grouped into areas of concern.) A selective list of references keyed to specific questions in the Guide provide the theoretical background for sound decision-making.

The sixteen films are classified into one of four categories: the act of teaching; students in academic difficulty; students in personal difficulty; and cultural conflict, controversy and grading. The act of teaching considers problems related to teaching style, skills and method, i.e., what to do when a class gets you "way off the track." Academic problems include ones related to social relationships as well as intellectual ability. Personal difficulties include problems concerned with lack of motivation, anxiety, and self-confidence. The last category, cultural conflict, controversy and grading, poses controversial problems such as teaching controversial issues, liberalizing the grading system, and cultural differences between students and teachers.

Critical Moments in Teaching

Activities:

Students view the film (about 20 minutes) and then discuss (or respond in written form to) the problem situation. Guided by sets of questions, the general discussion procedures followed in arriving at a problem-solution are:

1. Consider questions regarding the background of the problem (e.g., psychological)
2. Consult references
3. Consider any added information (e.g., student records)
4. Work through the "Intensive Analysis" section (not present in all incidents)
5. Problem solution: define problem, suggest causative factors and conditions, formulate a solution, anticipate consequences
6. Role-playing to act upon the decision or solution (not included in all incidents)

Objectives and Criterion Assessment:

No objectives are stated; however, the implicit objective is for the student to obtain the knowledge for professional decision-making, to apply it and to practice making decisions. Criterion measures are not specified but could be extrapolated from the manual.

Uses in Teacher Education Programs:

This series can be used in methods courses or laboratory courses related to student teaching. Some of the problem incidents could be integrated into Educational Psychology courses. Although the materials could be used on an individual basis, they are probably optimized by a group discussion format. Because of the specificity of the questions and the identification and close coordination between the reference material and the questions, an instructor is not necessary and the discussion can be self-administered.

Title: Developing Effective Instruction
Author or Developer: General Programmed Teaching
Publisher or other source: General Programmed Teaching
P.O. Box 402, 424 University Avenue
Palo Alto, California 94302
Cost*: complete workshop (15 units) approx. \$650.00
Student workbooks \$ 5.95 each
(first five units may be purchased separately at \$55.00 per unit)
Materials: audio-tape, filmstrip, workbook, Monitor's Manual

Description:

Entirely self-instructional course designed to teach principles and procedures for developing performance-based learning and instruction. Fifteen units deal with the following areas: Basic principles of performance-based learning; General Goals, Affective Objectives, and Cognitive Objectives; Main Components of an Objective; Classification of Objectives (verbal, discrimination, motor performance); Criterion Tests; Determining Entry Level; Entry Level; Tests; Stimulus and Response; One-way and Two-way Stimulus-Response Pairs; Single and Multiple Discriminations; Content Analysis; Stimulus-Response Pairs in Chain Activities; Developing Objectives and Deriving Content; Programmed Lesson-Plans and Instructional Media; Validation.

The units assist the teacher in developing performance-based instruction on several levels: planning units and lessons; carrying out student contracts; creating programmed materials.

Activities:

For each unit students watch a film-strip augmented by an audio-tape presentation. Throughout the presentation, the audio-tape directs the students to answer the workbook questions specified for that unit. Students are then given an assessment test.

Objectives and Criterion Assessment:

The objectives for each unit are clearly stated in the participant's workbook. The workbook questions are designed to meet these objectives. At the end of each unit, students are given a separate assessment test indicating whether the objectives for that unit have been met.

Uses in Teacher Education Programs:

These materials could be used in connection with laboratory or student-teaching experiences, or integrated into methods courses in any subject area. After the initial units on performance-based concepts (stating behavioral objectives, etc.) the remaining units can be flexibly combined for a variety of purposes: training people to develop or administer programmed materials, designing performance-based curricula, planning lessons, or understanding principles of behavior modification.

* Prices subject to discount for quantity and type.

Title of Materials: Development of Higher Level Thinking Abilities
Author or Developer: John A. McCollum and Rose Marie David
Publisher or Source: Northwest Regional Educational Laboratory
710 S.W. Second Avenue
500 Lindsay Building
Portland, Oregon 97204

Cost: information not available

Materials: printed leader's guide
printed participant materials (can be duplicated locally)
30-minute demonstration film
5 audiotapes
1 slide tape

General Description:

This is a 40-hour course based on Hilda Taba's work on teaching strategies which increase children's skills in categorizing, generalizing, and applying generalizations. This course can be presented as a workshop, extension course, or methods course. The major topics dealt with are: Rationale for Change; Rationale for Curriculum Development; Question Strategies and Discussion Skills; Concept Diagnosis; Interpretation of Data; Application of Knowledge.

Activities:

The training model used in this program involves a series of rotations through the following steps:

- 1) sensitivity experience - the instructor and students role-play as each thinking process is introduced
- 2) knowledge base - presentation to students of theory and technique
- 3) simulation experience - small groups work on problem-solving exercises utilizing each thinking process
- 4) laboratory experiences - students microteach using each thinking process, and receive systematic feedback on their behavior
- 5) application - students plan instructional sequences utilizing each thinking process

Objectives and Criterion Assessment:

Behavioral objectives are stated for the total course, but not for each individual unit or lesson. Data collection instruments serve to provide criterion assessments of laboratory experiences. Forms for self-evaluation of group problem-solving are also available.

Uses in Teacher Education Programs:

At the pre-service level this program is most appropriate for use in a social studies or general methods course. It is designed for use with groups under the guidance of an instructor.

Title: Discovering New Dimensions in the Teaching Process
Developers: Greta Morine, Robert Spaulding and Selma Greenberg
Publisher or Source: Intext Educational Publishers
College Division
Scranton, Pennsylvania 18515

Cost: \$3.95

Materials: Textbook

General Description:

This book is designed to help prospective teachers analyze and evaluate their verbal interaction with students in terms of its relationship to their instructional objectives. It focuses on how certain techniques, such as presenting information, asking questions, and reacting to student responses, might vary according to different instructional roles, such as "intellectual authority" or "intellectual guide." Practice exercises are based on transcripts of actual dialogue from both secondary and elementary school classrooms. Immediate feedback (correct answers) follows each practice exercise. Chapter titles include: Categorizing Teaching Activities; Recording Teaching Activities; Analyzing Recorded Behavior; Patterns of Interaction; Evaluating Teaching Behavior; Categorizing Teacher Questions; Teacher Roles and Teaching Behavior.

Activities:

For each segment of instruction students read explanation and examples, do exercises applying information learned, and check their answers against coded copies of the exercises.

Objectives and Criterion Assessment:

Behavioral objectives implicit in this material are that the student learn to categorize, analyze and evaluate his own teaching behavior.

Uses in Teacher Education Programs:

This material can be self-administered or used with seminar groups. It can be used in connection with laboratory or student-teaching experiences.

Title of Materials: The Discovery Teaching Game
Author or Developer: Paul Twelker and Donald Kohl
Publisher or Source: Simulation Systems Program
Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon 97361

Special Ordering Instructions:

Exercises and information appear as appendices in a report titled Development of Low Cost Instructional Simulation Materials for Teacher Education. They can be reproduced by the purchaser.

Cost: Report - \$16.00

Materials: Printed instructions, problems, and issues. Printed information on a simulated class.

General Description:

A set of problems or issues which might typically confront a teacher using discovery techniques is provided. Teams of students compete with each other to provide the best strategy for dealing with the issue. Problems are graded in difficulty and points are won on the basis of difficulty of the problem and adequacy of the solution.

Activities:

Students study information on a simulated class, select problems and "solve" them through small group (team) discussion.

Objectives and Criterion Assessment:

The basic objective is to provide students with experience in dealing with some problems common to discovery teaching. No specific behavioral objectives are stated and no criterion measures exist.

Uses in Teacher Education Program:

These materials can be used with methods courses or with student-teaching experiences. They are appropriate for use with groups of ten to twenty students, and can be self-administered by these groups or used under the guidance of an instructor.

Title of Materials: Discovery Teaching Simulation System
Author or Developer: Paul Twelker
Publisher or Source: Simulation Systems Program
Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon 97361

Special ordering instructions:

Instructor's manual and student manuals appear as appendices in a report entitled Development of Low-Cost Instructional Simulation Materials for Teacher Education. They can be reproduced by the purchaser.

Cost: Report - \$16.00

Materials: printed instructor's manual and student manual; Phase I manual designed to be used with films, but the films are not available.

General Description:

The Phase I manual covers the roles of a teacher, characteristics of discovery learning and teaching, discriminating discovery learning and teaching, purposes of discovery learning and discovery teaching spring boards. The Phase II manual deals with the following discovery techniques: purpose of discovery; focusing on the problem; indirect guidance and encouragement; reinforcement of exploration; springboards; all behaviors in context.

Activities:

Students read explanations of techniques, view situations on film, and identify characteristics or make decisions about what has occurred. Role-playing simulation is used. Some small group discussion is encouraged. At the end of Phase II microteaching situations are used.

Objectives and Criterion Assessment:

Objectives for each exercise are clearly stated. On Phase I a programmed format is used, and immediate feedback of correct answers provides for student self-evaluation. In Phase II "teacher behavior check-lists" are provided for feedback to the student who is playing the teacher role.

Uses in Teacher Education Program:

These materials are appropriate for use in connection with laboratory or student teaching experiences, or with a variety of methods courses. They can be self-administered by small groups of students, or used under the guidance of an instructor.

Title: Distar Series
Developer: Englemann-Becker Follow Through Project
Publisher: Science Research Associates
259 East Erie Street
Chicago, Illinois 60611

Cost: Teacher Kits:
Reading I \$50.00
Reading II \$75.00
Language I \$150.00
Arithmetic \$120.00

Materials: Presentation Books, Teachers Guides, assorted visuals
Supplementary materials include a text, Teaching: A Basic Course in Applied Psychology

Special ordering instructions:

Teaching: A Basic Course in Applied Psychology is available through:
Englemann-Becker Corporation
Station A, P.O. Box 2157
Champaign, Illinois 61820.

These materials will be published by SRA in Fall, 1971:

Part I: Behavior Modification	\$5.50
Part II: Concepts and Operations	\$5.50
Parts I and II	\$10.00
Group Leader Discussion Guide,	
Part I	\$2.00
Part II	\$2.00

Description:

The Englemann-Becker Follow-Through Project bases its teaching on Behavior Modification principles. This program is designed to train teachers to apply a Behavior Modification strategy in the areas of reading, arithmetic and language. The instructional materials in these content areas (first three years) have been designed to complement the teaching strategy.

Using these materials in a one or two week workshop or on-site, trainees master basic interactive teaching skills (reinforcement, signaling, correcting), prototype lesson formats and specific lessons in the various content areas.*

Activities:

Training generally occurs in a workshop setting conducted by "local" teacher supervisors. Activities include the completion of written exercises, demonstration and discussion, and practice in a peer-teaching situation.

*NOTE: The description of this program is based on the teacher training materials used by Project Follow-Through in their teacher training workshops. These are excerpts and adaptations from the Distar Series which are primarily curriculum materials.

Distar series

Objectives and Assessment Criterion:

The implicit objective of this program is mastery of the basic teaching skills and lesson formats accompanying the instructional materials in reading, mathematics and language. The criterion measure consists of a rating (observation) form used by the trainers.

Uses in Teacher Education Programs:

This program can be used for clinical experiences connected with student teaching, general methods courses and courses in Educational Psychology. Its various parts are applicable to different aspects of teacher training, e.g., skill training, teaching strategies.

Title: Facilitating Inquiry in the Classroom
Author: Fred E. Newton, Northwest Regional Educational Laboratory
Publisher: Copy-Print Centers
1208 S.W. Jefferson Street
Portland, Oregon 97201
(Leader's Guide and Participant Materials)

Special Ordering Instructions:

Confrontation Tapes (audio) can be obtained from:
Rex Recording Studios
931 S.W. King Street
Portland, Oregon 97205

Demonstration equipment for inquiry exercises (pulse glass and bimetallic strip) can be obtained from:

School Teaching Aids and Supplies
1225 Eighth Street
Berkeley, California 94710

Cost: Leader's Guide \$14.00
Participant Materials 2.50 each
Confrontation Tapes \$12.27 set of four
Demonstration Equipment
pulse glass \$3.00 each
strip \$12.00 each

Materials:

Printed materials include the Leader's Guide and participant materials. Four audio tapes and several items of demonstration equipment are necessary support materials.

Description:

This course in facilitating inquiry is based upon Richard Suchman's inquiry training technique. It is designed as a 40- to 45-hour workshop. The leader is provided with detailed instructions in the Leader's Guide, and need not be specially trained for this role. The sessions (or subsets) include such titles as: Experiencing Inquiry as an Inquirer; Identifying Possible Risks and Advantages; Allowing Inquiry to Happen; Inquirer Behavior; Practicing Allowing Inquiry Moves; Evaluating Teamwork Relationships; Developing Problem Focuses; Facilitating Growth Moves; Using Tuning-In Moves; Assessing Practice Tapes.

Activities:

Interaction of a demonstration class is presented on audio tape and in typescript form. There are written exercises requiring identification of the action techniques being used by the demonstration teacher, and other exercises requiring participants to respond to questions or comments from students in the demonstration class. Participants work in groups of three or six to discuss and practice the interaction techniques presented. At several points they teach practice lessons in their own classrooms and tape these for evaluation by the workshop group.

Facilitating Inquiry in the Classroom

Objectives and Criterion Assessment:

Specific behavioral objectives are stated. Assessment is largely self-evaluation, with feedback provided in written form in the participant materials and also from the members of each study group of three participants. The leader does not play an evaluative role.

Uses in Teacher Education Programs:

These materials are appropriate for use in connection with science methods courses, or with student-teaching experiences. They are designed for a group of about 24 students under the direction of an instructor.

Title: Films on Cognitive Development
Author: Ruth Formanek and Greta Morine
Publisher: Forward Looking Films
R.F.D. #1
State Line, Massachusetts 01261
Cost: set of 10 or 11 Super 8 cartridges plus 30 manuals \$190.00
Rental of 8mm or Super 8 cartridges \$ 25.00
Materials: Silent Super8 or 8mm continuous loop color films, with
student manuals

Description:

"Stages of Classification" (10 cartridges) illustrates four different classification tasks from The Early Growth of Logic, by Inhelder and Piaget. Each task is performed by eight different children, ages 3 to 8 years.

"Conservation Tasks" (11 cartridges) shows administration of five different conservation tasks to each of six children, ages four to seven.

Manuals provide additional test protocols.

Activities:

Students can observe children's responses and attempt to classify behavior, if a discovery or inquiry format is used in presentation of the films. An alternative activity is to learn how to administer tasks through viewing the films. Individual children can then be tested and their responses analyzed. Several alternative suggestions for use are provided in the manuals.

Objectives and Criterion Assessment:

No behavioral objectives are stated. Implicit objectives are to analyze and compare children's responses to cognitive tasks. Sample protocols in manuals provide materials for criterion measures of this skill.

Uses in Teacher Education Programs:

Appropriate for use in connection with Child Development courses or methods classes dealing with mathematics and social studies. Can be self-administered by small groups or used in classes with instructor.

Title: Guided Self-Analysis: Teaching for Inquiry
Developer: Theodore Parsons
Publisher: Guided Self-Analysis Professional Development Systems
2140 Shattuck
Berkeley, California 94704
Cost: \$50.00 for set of six manuals
Materials: written material (six manuals); audio- or videotape lessons
and facilities are required but not provided by the program

Description:

The Guided Self-Analysis Program: Teaching for Inquiry aims to improve instructional competence by having the teacher learn a series of focussed interaction codes, a system for computing profiles for each code, and guidelines for interpreting the profiles. He then codes, computes, and analyzes his own teaching. The program has six sequential coding schedules. Each schedule focuses on a specific type of teaching behavior, e.g., teacher question, teacher responses, type of teacher talk, etc. However, the schedules are interrelated and the interpretation of teaching style and classroom interaction is based upon the relationships among the codes.

The six schedules (focussed codes) are Schedule A: Questioning Strategies, classified according to the type of thinking required of the pupils; Schedule B: Response Patterns, classified according to whether they promote or inhibit further pupil thinking; Schedule C: Teacher Talk Patterns, a breakdown of the time spent in questions and responses, instruction, classroom management, etc.; Schedule D: Teacher-Pupil Talk Patterns; Schedule E: Experience Referents, analyzes extent to which teachers' questions relate to pupil experiences; and Schedule F: Levels of Thinking, analyzes congruence between level of thinking required by teacher questions and level represented by pupil responses.

Activities:

Each schedule has a corresponding manual explaining the coding system and the procedures for computing and analyzing the teacher profile. Student works through a series of practice coding tasks, first from transcripts and then from one's own videotape using the various schedules. Next he computes and interprets his own profile for a given schedule. Worksheets are provided for practice coding and analyzing additional videotape lessons.

Objectives and Criterion Assessment:

No objectives are specified for either teaching behaviors or coding and analyzing proficiency. Implicit is the assumption that with sufficient practice students will be able to apply all the coding schedules and to compute and interpret teaching profiles. The materials are designed so that objectives and performance criteria for coding, computing

Guided Self-Analysis: Teaching for Inquiry

and interpretation can easily be constructed, particularly if demonstration tapes are made and reliably coded. Another implicit assumption is that self-coding and analysis will induce changes in teaching behavior..

Use in Teacher Education Programs:

This program may be used in methods courses or clinical student-teaching experiences and can also be used for training supervisors in the analysis and interpretation of teaching behavior. In addition to their usefulness in analyzing the classroom environment, several of the focussed codes correspond closely to programs developing interactive teaching skills and may be used in conjunction with them, particularly in developing criterion measures. Provided laboratory facilities or equipment is available, the program can be entirely self-administering and can be used in an individual, group or teacher supervisor setting.

Title: Human Relations Training Unit
Author or Developer: Far West Laboratory for Research and Development
Publisher or Source: Anti-Defamation League
315 Lexington Avenue
New York, New York 10016

Cost: \$410

Materials: Films and discussion guides.

General Description:

These materials are designed to provide teachers with insights and skills that will better fit them to deal with human relations problems in inner-city and racially mixed schools. The unit titles include: School and Community Relations; Alienating Language; Rules and Regulations; Violent Confrontation in the Classroom. Included in the unit is a discussion leader's guide which suggests questions and techniques for developing maximum involvement during discussions.

Activities:

Filmed confrontation situations are employed as discussion stimulators. Teacher sensitivity is developed through discussion and role-playing situations.

Objectives and Criterion Measures:

Attitudinal as well as behavioral objectives are implicit in the organization of this material. No criterion measures are provided.

Uses in Teacher Education Programs:

These materials are appropriate for use with laboratory or student teaching experiences, or with methods courses, or with courses such as social foundations of education. They are designed for use with groups of moderate size and are not self-administered by students.

Title: Information Units

Author or Developer: Far West Laboratory for Research and Development

Publisher: Lockheed Education Systems

P.O. Box 504

Sunnyvale, California 94088

Cost: Sciences Information Unit (Elementary) - \$75.00

American Government Information Unit (High School) - \$7.95

Materials: Filmstrip and audio tape; printed matter.

General Description:

These materials were developed for use by the "school decision maker." Each unit provides information (goals, objectives, content, materials, teaching strategies, implementation requirements, costs, and evaluation) on a number of well-developed curricula in the designated subject area. Materials are to be used for analysis and comparison of these curricula. The American Government Unit is in book form. The Science Unit includes filmstrips and tapes showing programs "in action."

Activities:

Participants would study information provided and evaluate the curriculum materials in terms of a particular school or classroom situation. Could be used to provide simulated experience in the decision-making process.

Objectives and Criterion Assessment:

None are provided.

Uses in Teacher Education

These materials could be used in connection with methods courses to provide information on available curriculum materials. They could be used in connection with laboratory experiences to provide simulated experience in professional responsibilities outside the classroom. Suitable for use with groups, these materials could be self-administered.

Additional Information:

Several other information units are in the process of development and may be available by Fall, 1970. Further information can be obtained from: Dr. Feruccio Freschet, Far West Laboratory, 1 Garden Circle, Hotel Claremont, Berkeley, California 94705.

Title: Inner City Simulation Laboratory
Author or Developer: Donald R. Cruickshank
Publisher: Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

Cost: \$620.00

Materials: I. Director's Unit

- A. Simulation Director's Guide - information for director
- B. 2 filmstrips and records
- C. 14 sound and color films - 8 and 16 mm
- D. roleplaying cards
- E. Participant's Unit
- F. spirit masters
 - 1. audio-scripts
 - 2. scene settings and data
 - 3. Alternate Incident Response Forms
 - 4. Interaction Inventory

II. Participant's Unit

- A. Set of cumulative record folders for each child
- B. Data Book
 - 1. faculty handbook
 - 2. response guidelines
 - 3. bibliographical materials
 - 4. sociometric data for class
 - 5. psychological reports, letters, discipline records.

Description:

An inner city 6th grade class is simulated and the participants assume the role of the teacher, Pat Taylor, as they attempt to solve the problems presented to them. The problems are presented in the form of critical incidents to which the participants respond. The critical incidents are presented in various forms: sound and color movies, scripts and role playing. In total there are thirty-four critical incidents. The problem incidents include those that frequently occur in inner-city situations, e.g., child who comes to school without food or sleep, classroom interruptions, getting parents interested in children's problems, as well as academic and behavioral problems that occur in any classroom.

There are two components to the laboratory: The Director's Unit and the Participant's Unit. The Director's Unit includes all the materials described above including guide, schedules, suggested sequence of activities and general organization. The Participant's Unit includes all the materials a teacher may receive as she enters a teaching situation. The materials are listed in detail above. The activities involve the teacher in decision-making and the development of alternate options and/or solutions.

Inner City Simulation Laboratory

Activities:

Participants read the data handbook and study the cumulative folders, then respond to the critical incidents as if they were the teacher, Pat Taylor. After responding and reacting to the incident the participants engage in discussion and analysis of the various interpretations of the incident. The activities are based on perceiving the critical incident through film, playlet, or role-playing, and then proceeding to problem solving - either individually or in group discussion and analysis.

Objectives and Criterion Assessment:

Objectives are stated in the guide, but it is suggested that each program develop its own objectives relevant to the program's use of the Laboratory. It is also suggested that behavioral objectives be developed for each incident and an example is developed for Critical Incident 1; behavioral objectives for the other incidents need to be developed by individual programs.

Response guide lines are provided in the material and it is also suggested that role-playing incidents be tape-recorded for subsequent analysis. An Interaction Inventory Instrument is provided which feeds back to the participants the reactions by his peers to his solution.

Uses in Teacher Education Programs

This laboratory can be used in pre-service and in-service teacher education in the following ways:

1. As a special short-term workshop
2. As the basis for a long-term course or program
3. As the basis for program and/or course that relates to the disadvantaged
4. As a complement to methods courses, foundations courses and child development courses
5. As an orientation to or in conjunction with field experiences.

Schedules and organization are provided for each of the pos
for teacher education programs.

Title: Instructional Design: A Self-Directed Learning Program
Author: David P. Butts
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult Source
Materials: manual

Description:

The self-directed learning guide is designed as training in the skills for designing and planning instruction. It consists of twenty-two tasks organized around a single design or planning skill. For each task there is a pre-test, task activity and a post-test. The task activity items require both multiple choice and open-ended written responses. Most of the task activities are short and the entire sequence could be completed in about three to four hours. The task areas include behavioral objectives, task analysis, appraisal and assessment, matching instruction and materials to objectives, managing space and time, constructing instructional plans and initiating instruction.

Activities:

Students work through the guide on their own, first taking the pre-test for each task. If their performance is satisfactory, they can skip the task activity and complete the post-test. The answers for the pre-test are included in the Guide. The post-test is handed in to the instructor for scoring. The task activities all require the student to make written responses.

Objectives and Criterion Measures:

Behavioral objectives are specified for each instructional design task. Criterion measures (post-tests) are also included although the performance level is not specified. In addition, pre-tests are provided for each task.

Uses in Teacher Education Programs:

These exercises could be a part of methods courses or clinical experience. They are probably most helpful as diagnostic and assessment tools in appraising students in design skills and pinpointing the areas for additional practice.

Title: Intellectual Development of Babies
Author: Ruth Formanek and Greta Marine
Publisher: Forward Looking Films
R.F.D. #1
State Line, Massachusetts 01261
Cost: Set of 9 8mm cartridges plus 30 manuals \$150.00
Rental of 16mm film 15.00
Materials: Silent, 8mm continuous loop color film - 9 cartridges.

Description:

This film presents sequences of behavior of eight babies, ages 5 weeks through 13 months. Stages of development as described by Jean Piaget (sensori-motor period) are illustrated, as well as such Piagetian concepts as assimilation, accommodation, and object permanence.

Activities:

Film is silent, so it can be used to have students develop skills of observing and describing behavior of young children. It can also be used with comment from the instructor. Cartridges can be organized in several different ways. Suggestions are contained in the manual.

Objectives and Criterion Assessment:

No specific behavioral objectives or criterion measures are stated. Implicit objectives are to write objective descriptions of behavior observed and to apply Piagetian concepts in explaining or interpreting observed behavior.

Uses in Teacher Education Programs:

Appropriate for use in connection with child development courses. Films can be used by individual students or small groups as an exercise in describing behavior. They can be used with an instructor for presentation and illustration of Piagetian concepts.

Title: Interaction Analysis
Author: John H. Hansen and Robert A. Anderson
Publisher: Northwest Regional Educational Laboratory
Communications and Disseminations
710 S.W. Second Avenue
500 Lindsay Building
Portland, Oregon 97204

Special Ordering Instructions:

Trainers Manual includes copies of student materials and transparencies, which can be duplicated locally. A training tape and training film are obtainable from:

Teacher Inservice Programs and Services
P.O. Box 465
Eugene, Oregon 97401

A filmstrip with audiotape is obtainable from:
University of Minnesota
Audio-Visual Center
Minneapolis, Minnesota

A textbook (Interaction Analysis: Theory, Research, and Application, by Amidon and Hough) is obtainable from:

Addison Wesley

Reading, Massachusetts

Cost:	Trainer's Manual	\$4.00
	Training Tape	\$12.00
	Training Film	\$5.00 rental
		\$22.00 purchase
	Filmstrip with audiotape	\$20.00
	Textbook	\$4.50 paperback

Materials: Printed materials include a trainer's manual, a textbook and handout materials. A training tape, film, and filmstrip with audiotape are necessary supplements to these materials.

Description:

This course in interaction analysis is designed as a 40-hour workshop in use of the Flanders-Amidon matrix. It deals with category definitions; tallying in the matrix; analysis of the matrix; categorical teaching; effect of categories.

Activities:

Students read or view instructions on use of the matrix, and apply these instructions in relation to typescripts of lessons, which they can hear on tape as well as read. They attempt to teach lessons utilizing behaviors which fit into particular categories. They engage in role-playing.

Objectives and Criterion Assessment:

Specific behavioral objectives are stated for each segment of the course. The exercises providing experience in tallying and analyzing the matrix are numerous, and some can be used as criterion measures.

Interaction Analysis

Uses in Teacher Education Programs:

These materials are designed to be used in a workshop format, using 3 two-day periods, spaced at intervals of a week or more. They are for use with a group of students under the guidance of a knowledgeable instructor. They are appropriate for use with student teachers. They would also be good training materials for supervisors or master teachers working with student teachers.

Title of Materials: Interpersonal Communications
Author or Developer: John Wallen
Publisher or Source: Northwest Regional Educational Laboratory
710 S.W. Second Avenue
500 Lindsay Building
Portland, Oregon 97204

Cost: information not available

Materials: printed instructor's manual
printed participant materials
9 films
1 audiotape

General Description:

This program is designed for use in a workshop setting. Materials are based on the work of the National Training Laboratories, Institute for Applied Behavioral Science. The following topics related to interpersonal communications are dealt with: paraphrasing; behavior description; describing feelings; nonverbal communication and perception check; the concept of feedback; expectations and communication; the interpersonal gap; the effects of feelings; matching behavior with intentions; open communications; communicating about interpersonal relationships; roles and patterns of interpersonal communications; norms and communication; one and two-way communication; communication patterns in the school building; communicating under pressure; assessment of knowledge; improving my skills; developing support for continuous learning.

Activities:

Students learn about, practice, and analyze the various communication skills in small groups.

Objectives and Criterion Assessment:

Behavioral objectives are provided. Criterion assessments involve self-evaluation.

Uses in Teacher Education Programs:

This program could be used in connection with student teaching experiences. It does not fit easily into patterns of traditional methods or foundations courses. It is designed for use with a group under the guidance of an instructor.

Title: Introduction to Early Childhood Education and a Laboratory Workbook to Early Childhood Education
Author: Verna Hildebrand
Publisher: The Macmillan Company
866 Third Avenue
New York, New York 10022
Cost: text - \$7.95; workbook - \$3.95
Materials: textbook and laboratory workbook

Description:

Introduction to Early Childhood Education and the accompanying laboratory workbook is a complete course in Early Childhood Education designed to maximize the learning from student-teachers' observation and participation experiences by co-ordinating their college and clinical coursework. Each chapter in the textbook has a corresponding lesson in the Laboratory-workbook; the text provides the theoretical background while the laboratory lessons guide students through various activities. They are asked to write up classroom observations, undertake a case-study and plan and carry out learning experiences for children. The text and workbook include the following laboratory experiences: acquaintance with the school and local facilities; philosophy of early childhood education; getting to know different children; scheduling, guidance techniques; out-of-door activities; creative art activities; science concepts; language arts - literature, dramatic play; music and rhythm; experiences related to food; planning and evaluating program; teacher-parent relations; and the Early Childhood Education profession. Each chapter is self-contained and can be arranged in any sequence.

Activities:

The supervisor or instructor assigns the lessons or portions of lessons required of the student. The student then reads the text, carries out the observing, planning or teaching activities, fills out the worksheet and returns them to his clinical instructor.

Objectives and Assessment Criterion:

Objectives are specified for each lesson but no assessment criterion is provided nor is a level of performance specified. In some instances, simply carrying out the worksheet activities will meet the objectives of the lessons, e.g., to investigate the local facilities; in other cases a more refined criterion measure may be needed.

Use in Teacher Education Programs:

This program can be used as a quarter, semester or two-term course in Early Childhood Education or as a supplement to such a course. It can also be incorporated into methods or clinical courses. Since each chapter is self-contained, individual lessons can be assigned, and the worksheets from some of the lessons can be used to structure clinical experiences regardless of the grade or subject area. The program can be self-administering and carried out on an independent or group study basis.

Title: Learning Interaction Analysis: A Programmed Approach
Author or Developer: Miles C. Olson
Publisher: Educational Consulting Association, Inc.
3311 South Broadway, Suite 304
Englewood, Colorado 80110
Cost: \$4.95 each (includes book and records)
Materials: 45 page booklet plus two 33-1/3 RPM records

Description:

A compact, entirely self-instructional programmed course designed to introduce students to the concept of Interactional Analysis and develop their knowledge and coding proficiency using the Flanders Category System. The booklet is divided into four parts: (1) material describing Interaction Analysis and the Flanders Category System; (2) questions and exercises to learn and practice the category system; (3) material and exercises on completing a matrix and (4) information exploring how to interpret the matrix.

The material is carefully sequenced to develop the student's knowledge of the category system and then his coding skills for both the category and the unit of analysis (time).

Activities:

Students work through a series of questions and answers examining their knowledge, first of Interaction Analysis and then of the category system. At strategic intervals the students are instructed to listen to particular segments of classroom dialogue which are found in the records accompanying the book and to practice coding them. After the student learns to code using the Flanders system, he is given exercises designed to teach him how to record the coding results in a matrix format. Lastly, he reads the section on interpreting the matrix.

Objectives and Criterion Assessment:

The objectives are stated only very broadly. However, the design of the course and the programmed format implicitly insure an understanding and proficiency using the Flanders Interaction Analysis System. There is no specific level of proficiency other than completing the course.

Uses in Teacher Education Programs:

The materials are primarily useful in connection with laboratory or student teaching experiences. However, their compactness and efficiency make them valuable for general courses in Curriculum and Instruction. They may also be useful in courses in Educational Psychology.

Title: Minicourse on Effective Questioning in a Classroom Discussion
(Elementary)

Author or Developer: Far West Laboratory for Research and Development

Publisher or Source: Macmillan Educational Services, Inc.

8701 Wilshire Blvd.

Beverly Hills, California 90211

Cost: Purchase - \$1400.00

6-week rental - \$175.00

Lease for purchase - \$440.00 per year over 4-year period

Materials: Films and handbook.

General Description:

The minicourse is designed to change teacher behavior in relation to a specific, well-defined set of teaching skills. The skills dealt with in Effective Questioning are: redirecting questions; calling on nonvolunteers; avoiding repetition of questions and pupil answers; avoiding answering own questions; prompting; seeking further clarification; framing comprehension or concept questions; framing analysis questions; framing evaluation questions. A minicourse on Effective Questioning in a Classroom Discussion (Secondary) is expected to be available by Fall, 1971.

Activities:

The student receives instruction on a specific skill by viewing a film and reading a handbook. He then microteaches a ten-minute lesson to a group or individual, replays the audio or videotaped lesson, and evaluates his performance. Finally he revises and reteaches his lesson, again taping and evaluating it.

Objectives and Criterion Assessment:

The handbook indicates specific objectives for each lesson and activity. Evaluation forms provided in the handbook operate as criterion measures for self-evaluation by students.

Uses in Teacher Education Programs:

These materials are appropriate for use in connection with methods courses or student teaching experiences. They are designed to be self-administered.

Title: Minicourse on Individualizing Instruction in Mathematics
Author or Developer: Far West Laboratory for Research and Development
Publisher or Source: Macmillan Educational Services, Inc.
8701 Wilshire Blvd.
Beverly Hills, California 90211

Cost: Purchase - \$1400.00
6-week rental - \$175.00
Lease for purchase - \$440.00 per year over 4-year period

Materials: Films and handbook.

General Description:

The minicourse is designed to change teacher behavior in relation to a specific, well-defined set of teaching skills. The skills dealt with in Individualizing Instruction in Mathematics are: using verbal praise; asking prompting questions; asking diagnostic questions; using techniques to develop understanding, such as estimation, expanded notation, manipulative materials, diagram of problem, or number sentence; assigning evaluation problems; assigning practice examples; using scoring keys and scoring monitors; using peer tutoring.

Activities:

The student receives instruction on a specific skill by viewing a film and reading a handbook. He then microteaches a ten-minute lesson to a group or individual, replays the audio or videotaped lesson, and evaluates his performance. Finally he revises and reteaches his lesson, again taping and evaluating it.

Objectives and Criterion Assessment:

The handbook indicates specific objectives for each lesson and activity. Evaluation forms provided in the handbook operate as criterion measures for self-evaluation by students.

Uses in Teacher Education Programs:

These materials are appropriate for use in connection with methods courses or student teaching experiences. They are designed to be self-administered.

Title: Minicourse on Organizing the Primary Classroom for Independent Learning and Small-Group Instruction

Author or Developer: Far West Laboratory for Research and Development

Publisher or Source: expected to be available as of Fall, 1971; for information, contact: Dr. L. Hutchins

Far West Laboratory

1 Garden Circle

Hotel Claremont

Berkeley, California 94705

Cost: not yet determined

Materials: Films and handbook.

General Description:

This minicourse is designed to develop skills in creating a classroom environment in which independent learning and small-group instruction can occur simultaneously. The skills dealt with are: establishing the concept of working independently; developing pupil skills in solving problems that occur during independent work periods; developing expectations for delayed teacher response to pupil work; discussing assigned independent learning tasks; setting standards for what to do when a task is finished; providing delayed teacher response; evaluating pupil success at working independently.

Activities:

The student receives instruction on a specific skill by viewing a film and reading a handbook. He then microteaches a ten-minute lesson to a group or individual, replays the audio or videotaped lesson, and evaluates his performance. Finally he revises and reteaches his lesson, again taping and evaluating it.

Objectives and Criterion Assessment:

The handbook indicates specific objectives for each lesson and activity. Evaluation forms provided in the handbook operate as criterion measures for self-evaluation by students.

Uses in Teacher Education Programs:

These materials are appropriate for use in connection with methods courses or student teaching experiences. They are designed to be self-administered.

Title: Minicourse on Thought and Language: Skills for Teaching the Child with Minimal Language Development

Author or Developer: Far West Laboratory for Research and Development

Publisher or Source: expected to be available as of Fall, 1971; for information contact: Dr. L. Hutchins

Far West Laboratory

1 Garden Circle

Hotel Claremont

Berkeley, California 94705

Cost: not yet determined

Materials: Films and handbook.

General Description:

This minicourse is designed to develop teaching skills that lead to language-learning by kindergarten children with minimal language background. The specific skills dealt with are: extending a phrase to a sentence; refining meaning; modeling a language pattern in context; eliciting language patterns; praising in specific terms; introducing specific positional words in context and in conjunction with specific objects; providing varied physical experiences to assure comprehension of positional words; eliciting pupil use of positional words; eliciting observations of similarities and differences; providing language patterns for expressing comparisons; describing an action while demonstrating it; eliciting pupil use of modeled verb.

Activities:

The student receives instruction on a specific skill by viewing a film and reading a handbook. He then microteaches a ten-minute lesson to a group or individual, replays the audio or videotaped lesson, and evaluates his performance. Finally he revises and reteaches his lesson, again taping and evaluating it.

Objectives and Criterion Assessment:

The handbook indicates specific objectives for each lesson and activity. Evaluation forms provided in the handbook operate as criterion measures for self-evaluation by students.

Uses in Teacher Education Programs:

These materials are appropriate for use in connection with methods courses or student teaching experiences. They are designed to be self-administered.

Title: Modifying Classroom Behavior
Author or Developer:
 Nancy Backley and Hill Walker
Publisher or Source:
 Research Press Company
 Champaign, Illinois 61820
Cost: \$3.00
Materials:
 Programmed textbook, paperback

General Description:

A combination of prose and programmed items is used to present information on procedures for classroom teachers utilizing behavior modification techniques. Topics include: How Behaviors are Learned; Why Behaviors Continue to be Maintained; How Behaviors Can be Eliminated; Measuring Behavior; Modifying Classroom Behavior.

Activities:

Students read materials, work through frames, and check their answers.

Objectives and Criterion Measures:

No specific objectives are stated. Programmed format provides criterion measure.

Uses in Teacher Education Program:

Can be individually administered. Useful in connection with Educational Psychology courses.

Title: Mr. Land's 6th Grade (Simulation Films)
Author or Developer: Bert Kersh
Publisher or Source: Dean Bert Kersh
Oregon College of Education
Monmouth, Oregon 97361

Cost: \$400

Materials: Films and supportive printed materials

General Description:

Films present a series of problematic situations in a sixth grade classroom. There are sixty "problems" of about one minute each, organized into sets of twenty problems, with each set representing one day in the classroom. Supportive materials include cumulative folders on the children in the class and information on the school and the teacher. Teacher trainees are expected to respond to the problem situations as a student teacher in the class. Each problem film is followed by two or three feedback films, so that the teacher trainee can view predictable kinds of reactions by children to alternative moves by the student teacher.

Activities:

Students view films and react verbally or in written form to each problem situation. Feedback films are then shown.

Objectives and Criterion Assessment:

No specific objectives are stated. No criterion measures are provided. However, the implicit objectives would seem to be that students develop a "repertoire" of responses to problem situations.

Uses in Teacher Education Programs:

These materials are appropriate for use with a variety of methods courses, or in connection with student teaching experiences. They can be used with groups of students under the instructor's guidance.

Title: Professional Decision-Making for Teachers
Authors: Drs. Bert Alfrey, Ron G. Joekel, Alan Seagren
University of Nebraska
Publisher: manual, Professional Decision-Making for Teachers
Johnsen Publishing Company
1135 "R" Street
Lincoln, Nebraska 58508
videotape:
Nebraska Educational Television
Council for Higher Education, Inc.
1600 "R" Street
Lincoln, Nebraska 68508
Cost: \$2.95 for manual
Consult N.E.T.C.H.E. for videotape
Materials: manual and 1" videotape

Description:

This series presents twenty short (1-2 minute) critical incidents requiring a problem solution. Three alternative courses of action for each situation are demonstrated on the videotape. Each incident is intended to stimulate discussion regarding these and other possible courses of action. A syllabus (manual) provides discussion questions, lists some relevant educational principles and a bibliography for each problem incident. The manual also gives the background and script of the filmed incident.

The twenty incidents are divided into those related to Student Teacher-Student Relationships, e.g., student asks irrelevant questions, non-motivated students, teacher "sermonizing", and those related to Student Teacher-Professional Staff relationships, e.g., problems with the cooperating teacher, parent-teacher conferences, placement of the student teacher.

Activities:

Students view the film incident stopping the tape (or reading) before viewing (reading) the three alternatives. At this point they consider the questions in the manual and propose their own solutions. The group can then view or read the three alternatives and discuss the merits of the various solutions.

Objectives and Assessment Criterion:

The objectives are not specified but the implicit objective is the generation of alternative problem-solutions. Similarly, no assessment criterion or level of performance is specified. However, given the implicit objective, it would be possible to specify both the objectives and assessment criterion.

Use in Teacher Education Programs:

This program is suitable for methods courses or laboratory courses in connection with the student teaching experience. Many of the incidents are quite relevant to problems of supervision and could be used in training supervisors. Provided the objectives and assessment devices are generated, the program can be self-administering, probably best utilized in a group situation.

Title: The Psychology of Learning and Instruction: Educational Psychology
Authors: John P. DeCecco (text)
Ronald W. Mayer (teacher's manual)
Source: Prentice-Hall, Inc.
Englewood Cliffs, New Jersey
Materials: Textbook, student guide and teacher's manual
Cost:

Description:

This program is a complete source in educational psychology based on a widely used text. Other instructional materials include the Student Guide which parallels the chapters in the text and the objective test items that follow. In addition, each chapter in the guide contains an outline of the structure of the text source, suggestions for supplementary reading, discussion questions for small or large group discussions (can be used as performance assessment), suggestions for class project or experiments, and self-test questions.

Topics include: A Basic Teaching Model, Instructional Objectives, Entering Behavior: a concept; The Development and Measurement of Intelligence; Motivation: how to increase student vim and vigor; the Education of the Disadvantaged Child; Basic Learning Conditions and Types; The Teaching and Learning of Skills: The Teaching and Learning of Verbal Knowledge; The Teaching and Learning of Concepts and Principles; Problem-solving, Creativity, and Discovery Learning; Programmed Instruction and Educational Technology; The New Science and Mathematics; How to Construct and Use Your Tests; How to Interpret Standardized Test Scores; How to Evaluate Research in Educational Psychology.

Activities:

A variety of activities are possible after students read the chapter in the text and respond to the written self-test items in the Student Guide. In addition, they can engage in small-group discussions over the discussion questions; carry out a project or experiment usually requiring live observation, or read supplementary materials. They may also be asked to respond to an instructor-developed assessment.

Objectives and Criterion Assessment:

The objectives for each chapter are stated in the text. Objective assessment measures are provided in the Student Guide although no level of performance is specified.

Uses in Teacher Education Programs:

This program is especially suited for courses in educational psychology.

Title of Material : RUPS: Research Utilizing Problem Solving
Author or Developer: Charles Jung, René Pino and Ruth Emory
Publisher or Source:

Copy-Print Centers
1206 S.W. Jefferson Street
Portland, Oregon 97201

Special Ordering Instructions:

Tape recording obtainable from
Rex Recording Studios
931 S.W. King Street
Portland, Oregon 97205

Cost: Leader's Manual \$6.00
Participant Materials \$2.25
Tape Recording \$3.25

Materials:

Printed manuals for use by leader and students, tape recording,
printed charts to be prepared by leader.

General Description:

A carefully designed and tested course requiring 35 hours of instruction, designed to develop skills in problem solving. These skills include: identifying the problem; analysis of the problem using the force field technique (Lewin); selecting tools for data collection; deriving implications and action alternatives from research findings; planning for action.

Activities:

Students build skills through participation in solution of a simulated classroom problem. At various points they also participate in analysis of the group process in which they are involved, and thereby develop skills in teamwork.

Objectives and Criterion Assessment:

Each unit of work clearly states behavioral objectives, and an evaluation sheet for each student permits self-assessment of attainment of these objectives following each exercise.

Uses in Teacher Education Programs:

These materials are designed for use with groups of 12 to 24 students, under the guidance of a leader. The manual provides the leader with complete instructions. The recommended procedure is to use these materials in a five-day workshop, with two three-hour follow-up sessions. These materials are appropriate for use with student teachers or teacher internes.

Title: Social Studies Modules, Making a Living
Developer: Miss Clyde I. Martin
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult source
Materials: manuals, videotapes

Description:

These modules present a course of instruction for teacher education in social studies. There are seven modules. Each module is organized around a topic area from the social studies and draws upon the major concepts and generalizations from the related discipline. The seven modules are: Designs for Living, Where Do We Live?, Insights Into Our Lives, Making a Living, The Living Law, Living in History, and Living Together. A manual entitled "Suggestions for Teachers of Professional Education Who Use Social Studies Modules with Prospective Elementary Teachers" is also available. Each topic area (module) offers prototype topics and lesson plans for each age level in the elementary school. These are analyzed for various aspects of instruction including cognitive processes.

Activities:

Students view the videotaped social studies lessons. Using the Instrument for Determining the Cognitive Process they identify the cognitive processes involved in the lesson activities. Using the Analysis Guide for Video Tapes, they answer questions (written or oral) regarding the content and procedures used in the lessons.

Objectives and Criterion Measures:

The objectives for this program are not explicitly stated; the implicit objectives are knowledge of the major social science concepts and topics, ability to integrate these into learning activities, and ability to formulate learning activities with a range of cognitive functioning. The criterion measures are based on the teacher's ability in applying the Instrument for Determining the Cognitive Process and the Analysis Guide. The questions on the latter are somewhat subjective; the criterion needs further explication. No level of performance is specified.

Uses in Teacher Education Programs:

This program can be used in conjunction with social studies methods courses and with clinical experiences related to student teaching.

Title of Materials: Systematic and Objective Analysis of Instruction
Author or Developer: James R. Hale and R. Allan Spanjer
Publisher or Source: Northwest Regional Educational Laboratory
710 S.W. Second Avenue
500 Lindsay Building
Portland, Oregon 97204

Cost: information not available

Materials: printed trainer's manual
printed participant materials
audiotape, videotape or film of classroom teaching episodes
to be furnished by user of this program

General Description:

This program is designed as a four-week workshop. It has two major phases. The first phase deals with developing effective interpersonal communication skills. Topics include: Group Processes; Communication Skills; Constructive Use of Feelings; Interpersonal Effect of Various Responses; Processes of Interpersonal Influence. The second phase deals with developing effective supervision skills. Topics include: A Model for Systematically Improving Instruction; Systematic Analysis of Teaching Performance; Strategy and the Conference; Problems and Issues in Improving Instruction and Supervision.

Activities:

The instructional model used in this program is "Doing-Looking-Learning." Some lecturing is involved but this tends to follow rather than precede concrete experiences. Group interaction and analysis is a major activity. Collecting objective data in classroom situations is an important activity also. Some programmed instruction is included, and some role-playing is used.

Objectives and Criterion Assessment:

Specific behavioral objectives for each activity are provided to the trainer, but are not included in the participant materials. Programmed materials provide for criterion assessment of knowledge related to the various topics. Self-evaluation and group evaluation guides are available to aid in assessment of higher level skills.

Uses in Teacher Education Programs:

This program is most appropriately used to train supervisors of student teachers or interns. It is designed for use with a group under the guidance of an instructor.

Title: Teaching Achievement Motivation
Author: Alfred S. Alschuler, Diane Tabor, James McIntyre
Publisher: Education Ventures, Inc.
209 Court Street
Middletown, Connecticut 06457

Cost: text alone \$4.95
sampler set (text and pamphlets) \$7.50
Materials: paperback manual and related pamphlets (availability of selected primary source materials from a general library collection).

Description:

Achievement motivation training is concerned with increasing students' need to achieve their own kind of excellence. "Need to achieve" involves three elements: planning to attain excellence, strong feelings about doing well and action strategies. A repertoire of procedures (techniques) is used to develop need achievement. These include imagination exercises, action exercises such as role plays, games, exercises which emphasize emotional responses and procedures which emphasize the "here-and-now."

The manual is divided into four parts: background in achievement motivation and Psychological Education; an achievement motivation workshop for teachers; motivation in classrooms; and achievement motivation training for students. The heart of the course is the teacher-run workshop (Chapter Two). It is designed as a ten-session (approximately thirty-hour) course whose goals are to increase knowledge about need achievement, about Psychological Education methods for increasing motives, and to make application of Psychological Education. Participants in the course learn about their own motive patterns as well as relating their experience to their teaching. Some sessions are optional.

Activity:

The manual provides the instructions, suggested schedule and content for the workshop sessions. The activities include role play, discussion, reading, games and other exercises. The participants rotate the planning and leadership function for each session.

Objectives and Assessment Criterion:

Each session includes a statement of the purposes for that session and sometimes subjective evaluation techniques. The implicit objectives for the course are primarily experiential. No objective criterion measures and performance level are specified. Follow-up activities such as classroom observation and implementation could be incorporated as performance objectives.

Uses in Teacher Education Programs:

This program is applicable to clinical experience in connection with student teaching and to courses in psychology. The materials are designed for self-administering groups of six to eight persons.

Title: Teaching for Problem-Solving: A Teaching Laboratory Manual
(Preliminary Education)
Author or Developer:
Thomas B. Gregory
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Special Ordering Instructions:
Report Series No. 32
Costs: Consult Source
Materials:
Laboratory Manual (Activities call for audio or video equipment and setting for micro-teaching experience.)

Description:

The manual introduces the teacher-candidate with a teaching strategy for teaching problem-solving. The strategy has four steps: Presenting the Problem, Formulating the Hypothesis, Verifying the Hypothesis and Applying the Generalization.

The manual provides guidelines for five micro-teaching experiences, one for each step of the teaching strategy and an initial unstructured lesson. Each of its sections, corresponding to the five lessons, includes a description of the activities involved in carrying out that step of the teaching strategy, the instructional objectives for the lesson, an Evaluation Guide and a Listening Guide. In addition to mastering the teaching strategy, the over-all program objectives include practice giving constructive feedback to someone else and providing feedback to oneself. The Guides mentioned above serve this purpose: they are built around the instructional objectives for each teaching lesson.

Activities:

Prior to teaching a short (5 to 20 minutes) lesson, the teacher-candidate reads the appropriate section in the Laboratory Manual. Each section describes one aspect of the teaching strategy and gives the instructions and objectives for that lesson. Since the Laboratory Manual does not provide any topics or materials for developing the lessons, sufficient planning and preparing time has to be built into the micro-teaching schedule.

The teacher-candidate teaches the lesson from four-to-eight students (may be peers) audio- or video-taping it. When not teaching or serving as role-players, teacher-candidates then observe and evaluate each other. The teacher-candidate using the Listening Guide listens to his own lesson. Each lesson and feedback takes less than an hour.

Objectives and Criterion Assessment:

Instructional objectives are provided for each lesson accompanied by an evaluation guide (rating scale) geared to those objectives. However, the guide provides only subject measures of achievement of those objectives and does not specify a level of proficiency. Because the topics and materials for the lessons are not specified in advance, it may be difficult to make refined, on-the-spot judgments for the assess-

Teaching for Problem-Solving

ment criterion, i.e., appropriate to the student's developmental status, or to make task analysis sufficiently thorough. In this case, some of the criterion measures would probably serve as focal points for analysis rather than as accurate measures of performance.

Uses in Teacher Education Programs:

The program could be used in conjunction with laboratory or student teaching experiences or integrated into methods courses, especially science, math and social studies. Although the four steps of the teaching strategy are integrated and sequential, the lessons are not necessarily cumulative. To some extent, each of the four steps may be considered as isolatable teaching skills and practiced on an independent basis, provided the teacher-candidate has some understanding of the previous steps, i.e., has read the previous sections. Furthermore, the instructions are very general: each lesson can be re-assigned several times until proficiency is achieved.

Title: Teaching in IPI (Individually Prescribed Instruction) Mathematics

Author or Developer: Research for Better Schools

Publisher: Research for Better Schools

1700 Market Street

Philadelphia, Pennsylvania

Cost: six volume set (includes records) \$10.00

Materials: six workbooks, record set of three 33-1/3 RPM records

Description:

IPI Mathematics is a system of individualized instruction for children which co-ordinates behavioral objectives, diagnostic instruments, curriculum material, teaching methods and instructional time (pacing). This self-instructional program, Teaching in IPI Mathematics, is designed to train teachers in the general diagnosing, planning and guiding skills involved in individualizing instruction, and specifically to implement the IPI Mathematics Curriculum.

Six volumes deal with the following areas: 1) An overview of Individualized Instruction and IPI (Volume I); 2) Behavioral Objectives and the specific objectives in IPI Mathematics (Volume II); 3) Diagnosing Student Achievement - (administering and prescribing on the basis of student achievement tests - Volume 3); 4) Developing prescriptions for three case studies (Volumes 4, 5 and 6).

Activities:

The six manuals are divided into sequenced units of work, each accompanied by pretests, post-tests and explicit instructions for self-instructional use. The workbook guides the student through reading materials, questions, application exercises or a small group discussion with other participants or with the trainer. Periodically, he is directed to listen to the records accompanying the workbook. For the most part, the activities are self-instructional based on the workbook and records.

Objectives and Criterion Assessment:

The objectives for each unit are clearly stated, as are the criterion measure and level of performance. Pretests and post-tests provide assessment measures, and dependent upon the student's performance on these, he is directed to the next appropriate activity.

Uses in Teacher Education Programs:

The materials could be used in connection with laboratory or student teaching experiences or integrated into methods courses in mathematics. Volumes One and Two are especially suited to introduce teachers to the concepts and procedures of individualizing instruction, though the entire program may be thought of as developing a teacher's general skills for individualization using IPI Math as the content vehicle.

Title: The Teaching of Science: A Self-Directed Learning Program
(Instructional Design for Science Teaching)
Author: David P. Butts, Gene E. Hall
Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Cost: Consult Source
Materials: Instructor's Guide; seven Planning Guides (student manuals);
Science Unit Resource Manuals, Science Unit Equipment Kits;
audio- or video-tape facilities.
Special Ordering Instructions:
A separate module, Electrical Circuits and Personalized Video-tape
Feedback, coordinates and completes the activities specified in this pro-
gram.

Description:

This program is designed to train teachers in 1) science compe-
tencies basic to the recent curriculum reform movement in science
teaching and 2) instructional design skills applying them to curri-
culum materials from the science projects. The Instructor's Guide
for the total program makes provisions for the following teacher acti-
vities: Instructional Design Diagnosis, Instructional Design Sequence,
a Science Competency Sequence, a micro-teaching experience, analysis
of teaching, critique of topics (lessons), topic revision, constructing
a rationale for science teaching, and extra credit. The course flow-
chart places the student as decisions-maker, e.g., he chooses which of
these activities he needs. At the end of the entire course, however,
a student will have completed the following tasks:

- 1) Planned at least seven topics of instruction suitable for chil-
dren at the grade level or levels of their choice;
- 2) Revised two of the topics based on performance by students in
a micro-teaching experience;
- 3) Revised two topics based on critiques from peers;
- 4) Identified and demonstrated a variety of teaching strategies
and tactics for their instructional objectives;
- 5) Stated their own rationale for science teaching.

A separate module, Electrical Circuits and Personalized Video-tape
Feedback, ties together the competencies in science and instructional de-
sign with the interactive teaching and analysis of teaching activi-
ties.

The heart of the program, however, is the science competency and
instructional design and planning sequence found in the written
materials, the teacher Self-Directed Planning Guides. There are
seven independent guides, one for each grade, one through six, and a
seventh which combines grade level activities. The guide consists of a
series of instructional design exercises, each one based on a unit or
lesson from the new science curricula. Each exercise includes the
following activities: a pre-test; a science task sheet teaching the
related science competency and a competency appraisal measure; re-
lating the competency to instruction: matching objectives with instruc-
tional activities: constructing appraisal items for the exercise;

The Teaching of Science

identifying the necessary equipment; planning time and space; meeting with seminar for feedback and identification of possible student exercises. Examples of the exercise topics from Levels B (second) and Level M (mixed) include observing Living and Non-Living Things, Symmetry, Using Space-Time Relationships, Shapes and their Components, Mapping, Tracks.

Activities:

The range of experiences teacher-candidates will encounter in this program depends on how much of the over-all program is implemented (e.g., actual teaching of the planned lessons) by the program coordinator and which activities the teacher-candidate opts for. The expected sequence is as follows. Teacher-candidates work through the written activities in the Planning Guides. These include pre-tests on instructional design and science competency. The Science Competency Appraisal is scored by the instructor. Depending on his score the teacher candidate completes the Instructional Design and/or the Science Competency Sequences, written exercises. At the end of these exercises, he has completed planning for at least seven topics of instruction. These, one or more, are then taught to children in a micro-teaching format and the teaching behavior can be analyzed. The teacher-candidate also meets with a seminar group to have his topics critiqued and to critique others' topics. He is then expected to revise his topics on the basis of the feedback and to construct a rationale for science teaching.

Objectives and Criterion Assessment:

Objectives, assessment measures and levels of performance are clearly specified for the self-instructional activities in the Instructional Design and Science Competency sequences. These items are not provided for the seminar activities. A separate module, Electrical Circuits and Personalized Videotape Feedback, not previewed, covers the micro-teaching and analysis of teaching behaviors. The actual performance-based status of that module is not known at this time.

Uses in Teacher Education Programs:

This program can be a part of or an entire elementary science methods course. It can also be used or coordinated with clinical experiences in student teaching. Many of the Science competencies, especially those related to methodology, i.e., Hypothesis Formation, Identifying a Hypothesis, and Observing, are general scientific method competencies applicable in many subject areas. Others, such as Estimation Graphs, overlap with general Math competencies. These general aspects, complete with diagnostic and evaluative measures and learning experiences, can be selectively incorporated into the clinical experiences.

Title: Teaching Skills for Elementary and Secondary School Teachers
Author: Dwight Allen, Kevin A. Ryan, Robert N. Bush, James M. Cooper
Source: General Learning Corporation
3 East 54th Street
New York, New York 10022

Cost:	34 films and 91 manuals (both programs)	\$2,995.00
	19 films and 51 manuals (one program)	\$1,895.00
	Individual films	\$ 110.00
	"Introduction to Microteaching" (film)	\$ 250.00
	Response Repertoire films	\$ 90.00 each
	Manuals	\$ 1.50 each

Materials: films, instructional manuals

Description:

This series presents microteaching exercises dealing with the following skill areas: presentation; questioning; increasing student participation; response repertoire; creating student involvement. Each skill area is subdivided; for example, presentation skills involve: completeness of communication; lecturing; use of examples; planned repetition. Materials are available for either elementary or secondary school teachers and consist of: explanation of the skill to be developed; short film sequences providing model of the skill; typescripts of film with comments on how the skill is utilized; written skill drills; assignment for microteaching a lesson using the skill; evaluation sheet for use by students and supervisors. Teacher manuals are provided for each skill area.

Activities:

Although the format can vary enormously, the suggested general procedures are as follows: students read the written description prior to viewing the film on a particular skill; view the film and discuss the skill to make sure it is understood; plan and teach a microteaching lesson (5-10 minutes). Since the topics and materials for the microteaching lesson are not specified, these activities will probably occur over a period of two or three days.

Objectives and Criterion Assessment:

There are no stated behavioral objectives, but the implicit objective for each exercise is application of the particular skill in planning and conducting a lesson. The evaluation sheet provides a somewhat subjective measure of achievement of this objective. It cannot be considered a criterion measure since no level of proficiency is required. However, individual programs using these materials could easily establish their own criterion measure. The films and typescripts can be used as self-instructional materials, but the skill drills and evaluation sheets require feedback from the instructor.

Uses in Teacher Education Programs:

These materials could be used in connection with laboratory or student teaching experiences, or integrated into methods courses in any subject area. They deal with isolatable teaching skills, but not with

Teaching Skills for Elementary and Secondary School Teachers

integration of these skills at the level of instructional strategies. Breaking the skills down for learning purposes is very useful, but for purposes of teaching, it would seem helpful to augment the program with exercises integrating some of the skills, e.g., following up divergent questions with probing questions and student responses with cueing and/or reinforcement.

Title: Team Teaching Modules
Author: L. Jean York
Developer: Research and Development Center for Teacher Education
University of Texas
Austin, Texas
Publisher: The Leslie Press
111 Leslie Street
Dallas, Texas 75207
Cost: \$19.60, set of seven volumes (excludes non-written materials)
Materials: written materials, films, filmstrips, video-tape
Special Ordering Instructions:
Ordering instructions and costs for films and other multi-media materials are listed at the beginning of each module.

Description:

This series of modules has as its general objectives 1) the development of an understanding of the philosophy, background and processes of team teaching -- the knowledge of the kinds of personnel and roles composing a teaching team, team-planning, non-graded school organization and personal characteristics of team members; 2) knowledge of the organizational, diagnostic and evaluative techniques for grouping and for individualizing instruction; and 3) personal experience in self-paced, individualized instruction and self-evaluation. The series consists of seven modules:

- I. The Background, Philosophy and Purposes of Team Teaching
- II. The Roles of the Professional and Paraprofessional in Team Teaching
- III. Materials and Resources Needed for Team Teaching and Individualized Instruction
- IV. Grouping Children for Instruction in Team Teaching
- V. Team Teaching as a Facilitator of the Non-Graded School
- VI. Evaluation of Team Teaching and Children's Continuous Progress
- VII. Prerequisites for Good Planning Sessions in Team Teaching

Each module includes a variety of media - articles, films, filmstrips and/or tapes.

The series is designed for use on an independent, self-monitored basis, although it includes some group activities and some coordination may be necessary for distribution of non-printed materials. There is no particular sequence for the various modules except that Module I is recommended as a general prerequisite and Module V is recommended as a prerequisite to Module VI. Otherwise, the modules may be used independently of one another and in any particular order. The student makes decisions regarding the selection and order of his learning activities. The completion time for a module varies with the number and type of selected activities and with the rate of individual students. However, it is estimated that completion of a Module can range from two to eight hours.

Team Teaching Modules

Activities:

The student first completes a self-administered pre-test for a given module which indicates the need for further study. He proceeds through the material in the module Study Guide at his own rate, periodically taking objective self-tests to indicate his need for further study. On the basis of these, he makes decisions concerning the alternate kinds of multi-media instructional tasks, Learning Activities, he will take. Each Learning Activity is accompanied by a set of questions. After completing the Learning Activities and any review, the student completes a self-administered post-test for that module.

Objectives and Criterion Assessment:

Behavioral objectives for each module are stated at the beginning of the module. Criterion measures in the form of objective pre-tests and post-tests are provided; however, the level of performance is not specified.

Uses in Teacher Education Programs:

These modules are applicable to methods courses, curriculum courses and clinical experiences connected with student teaching.

Title of Materials: Using Tests Intelligently
Author or Developer: Quentin Stodola
Publisher or Other Source: Mr. Donel Price, Director
Broadcast Service Center
California State College, Los Angeles
5151 State College Drive
Los Angeles, California 90032

Special Ordering Instructions: The textbook which is to be used in connection with these materials is Basic Educational Tests and Measurement, by Quentin Stodola and Kalmer Stordahl. It is published by Science Research Associates, 259 East Erie Street, Chicago, Illinois 60611.

Cost: \$2300 for rental of 40 half-hour videotaped lessons, complete with a series of six objective tests (plus postage and insurance)
\$4.75 for cloth-bound copy of textbook

Materials: 2-inch broadcast quality videotape or 1-inch Sony videotape; mimeographed tests; textbook

General Description:

A videotaped course on educational tests and measurement available for scheduling to broadcast as an extension course or over closed-circuit television. Forty half-hour lessons deal with the three major topics of: Preparing Classroom Tests; Understanding Test Scores; Standardized Tests. The nine lessons dealing with classroom tests are titled: Test Planning, Essay Tests, Objective Tests, Tips for Writing Objective Items, Essay and Objective Tests Compared, Statistical Analysis of Test Results, Using Results of Statistical Analysis, Grading, and Using Tests to Improve Instruction.

Activities:

Students view each videotaped lesson. Throughout the lessons, students are asked to react to questions posed by the lecturer, and the appropriate answers are then provided by the lecturer with accompanying explanation. Each lesson is supplemented by reading in the textbook.

Objectives and Criterion Assessment:

Specific objectives are stated at the beginning of each videotaped lesson and reviewed at the end of the lesson. A series of six objective tests is provided for periodic assessment of learning. There are six forms for each test, so that repeated testing toward mastery can occur.

Uses in Teacher Education Programs:

These materials can be used in place of a traditional course on tests and measurement. They are designed for large group instruction.

Title: Vimcet Filmstrip-Tape Programs
Author: Vimcet Associates
Publisher: Vimcet Associates
P.O. Box 24714
Los Angeles, California 90024
Cost: \$15.00 per program, filmstrip, and tape: \$2.00 per guide
Materials: Eighteen audio-tapes, filmstrips, and instructor's manuals:
Utilization Guide;
Related materials:
Supplementary texts: James Popham and Eva Baker, Establishing Instructional Goals, Planning an Instructional Sequence, Systematic Instruction Englewood Cliffs, New Jersey: Prentice-Hall, 1970

Description:

This series consists of eighteen filmstrip-tape programs concerned primarily, but not exclusively, with instructional design and planning skills. The titles of the programs are: Educational Objectives: Systematic Instructional Decision-making; Selecting Appropriate Educational Objectives; Establishing Performance Standards: Appropriate Practice; Perceived Purpose (Motivation); Evaluation; A Curriculum Rationale (Tyler Model): Defining Content for Objectives; Affective Objectives: Analyzing Learner Outcomes; Knowledge of Results: Teaching Units and Lesson Plans: The Teaching of Reading: Discipline in a Classroom: Modern Measurement Methods: Instructional Supervision: A Criterion-Referenced Strategy; and Experimental Designs for School Research. The eighteen programs fall into three general categories -- instructional objectives, instructional sequences, and evaluation.

The programs can be used in various ways. To some extent they are sequential, but different combinations are possible for different purposes. For example, a workshop on Objectives might include only the six programs related to objectives while a course in Curriculum or Instructional Methods might include some of these but others as well. The Utilization Guide suggests possible sequences.

Each program has an instructor's manual, an audiotape and a filmstrip. Most of the programs last about thirty minutes. They can be used on a self-administered, independent or group basis. Post-program discussions are suggested but not required. An instructor is not required, except, perhaps, for administration of assessment measures and for the optional discussions.

Activities:

Students view the audiotape-filmstrip. During the sequence they are asked to make written responses on an answer-sheet provided by an instructor or coordinator. Following the filmed sequence they complete the assessment measure (written) supplied by the coordinator or instructor. The student may participate in a discussion of the program.

Vimcet Filmstrip Tape Programs

Objectives and Criterion Assessment:

Objectives and assessment measures are provided for each program. The criterion tests accompanying a program can be divided into two halves with one part being used as a pre-test and the other as a post-test.

Uses in Teacher Education Programs:

This series is applicable to methods courses and clinical experiences connected with student teaching. The programs can be used with pre-service and inservice students and with elementary and secondary teachers. Combinations of programs can be put together for courses or pre-service and inservice workshops on Objectives, Instructional Procedures, Curriculum, or Conference for Administration and Supervision. The programs can be used on an individual basis, perhaps as particular competency deficiencies are isolated.

SHORT DESCRIPTIONS
(Non-Previewed and/or Limited Availability Materials)

Title: Behavioral Objectives Package

Developer: Southwestern Cooperative Educational Laboratory

Source: SWCEL
117 Richmond Drive NE
Albuquerque, New Mexico 87106

Description:

The Behavioral Objectives Package contains slide-tape presentations and a workbook. Six lessons outline: goals and objectives; the instructional program; the three domains (cognitive, affective, and psychomotor); entering behaviors; components of a behavioral objective; how to write behavioral objectives. A pre- and post-test are included. Training in use of the package will be provided by the Southwest Cooperative Educational Lab.

Title: Conventional Media

Developer: Educational Media Laboratories

Source: Technifax Education Division
The Plastic Coating Corporation
Holyoke, Massachusetts 01040

Description:

This series deals with planning and utilizing film and filmstrips in teaching. The materials can be used in a directed workshop or on a self-instructional basis.

Title: Guided Self Analysis - Language Development

Developer: Theodore Parsons

Source: G.S.A. Professional Development Systems
2140 Shattuck
Berkeley, California 94704

Guided Self Analysis - Language Development

Description:

This system involves use of several interaction codes that enable the teacher (with audio or videotapes) to observe, analyze, and construct a profile of his own teaching behaviors. Seven interaction schedules are included. They deal with: using language models; facilitating inter-pupil talk; increasing student talk; behavior modeling in explanatory sequences; questioning for levels of thinking; responding to pupils; relating new concepts to direct or vicarious experience.

These materials should be available in the Fall of 1971.

Title: Meeting Your Cooperating Teacher

Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas

Description:

A slide/tape presentation dealing with students' concerns about relationships with their cooperating or supervising teachers. A discussion guide accompanies these materials which are available by special arrangement.

Title: Microcounseling

Developer: Allen E. Ivey
Professor of Education
University of Massachusetts
Amherst, Massachusetts

Description:

Microcounseling is a video system of counselor training which has recently been demonstrated to be effective in teaching human relations skills to a wide variety of individuals.

Based on microteaching, microcounseling selects single human relations skills, defines them behaviorally, and teaches them with the aid of video self-confrontation, written or programmed test manuals, and video models of the behavior to be taught. Specific examples of human relations behaviors taught within this framework include listening skills

Microcounseling

(attending behavior), expression of emotion, and direct mutual communication (based on sensitivity concepts).

A full review of research and methodology in microcounseling may be found in *Microcounseling: Innovations in Interviewing Training*, C.C. Thomas, Springfield, Illinois, 1971. Included in this book are manuals of the 12 skills into either performance based or traditional counselor or human relations training programs.

Title: Models of Teaching: Self-Instructional Modules

Developer: Bruce Joyce, Marsha Weil, Rhoda Wald

Source: Bruce Joyce

Teachers College, Columbia University
525 West 120th Street
New York, New York 10027

Supplementary materials include a text, *Models of Teaching*, written by Bruce Joyce and Marsha Weil. In press (January 1972) Prentice-Hall, Englewood Cliffs, New Jersey.

Description:

Models of Teaching conceptualizes approximately sixteen instructional strategies based upon theoretical and philosophical sources from the subject disciplines and behavioral sciences. For example, the works of Carl Rogers, Jerome Bruner, and Herbert Thelen have been drawn upon. The models fall into four categories, those concerned with: 1) the intellectual aspects of learning such as organization of data, inductive thinking, concept development; 2) social interaction models concerned with the development of group relations, the democratic process; 3) the centering of learning on personal development such as creativity, self-concept; and 4) behavior modification sources.

There are six modules for each teaching strategy. These are 1) Theory Module, 2) Demonstration Module, 3) Experience Module, 4) Peer Teaching, 5) Application, and 6) Decision-Making. These are designed to be self-instructional. Students proceed through written activities, analyzing a video-tape, teaching peers, applying the strategy with children and assessing one's teaching.

The module materials are not generally available but sample copies may be obtained.

Title: Organizational Constraints (Games and Simulations)

Source: Research and Development Center for Teacher Education
University of Texas
Austin, Texas

Description:

This program is concerned with school organization and learning to live with the school bureaucracy. It consists of three modules (games). The Organizational Game (currently available) deals with decision-making under a variety of organizational structures. It demonstrates the assets and limitations of the various structures. The second module, negotiations, concerns the legal, financial and structural constraints in school organizations. The third module, Teacher's In-Basket, presents teachers with samples of the information and decision-making demands that are made on teachers by administrators.

Title: Performance Based Curriculum in Human Relations

Developer: Allen E. Ivey
Professor of Education
University of Massachusetts
Amherst, Massachusetts

Description:

Nearing completion is a book of ten human relations skill modules developed in modular form. Skills of relaxation, non-verbal communication, attending behavior, racial relations, and others have been developed in packaged form with specific behaviors defined and exercises suggested for generalizing the behavior.

Important in the curriculum is the concept of "do-use-teach". Each participant must demonstrate his ability to engage in the behavior in question, his ability to generalize it to his daily life, and his ability to teach this concept to others. It is believed that effective learning entails the sharing of what is learned with others. The focus is not only on performing, but also on helping others to perform more successfully.

The curriculum has been tested in preliminary form in a wide variety of settings. Although used most frequently in teacher training, it has also been successful with counselors and human relations consultants, secondary and elementary pupils, and even has been field tested and found effective as a supplementary human relations training program for hospitalized mental patients.

These materials are described in general form in the attached paper on performance criteria in human relations for the classroom teacher.

Title: Precision-Teaching: A Tool for the School Counselor and Teacher

Developer: Ogden R. Lindsley

Description:

Precision-teaching develops a language and an observation system for recording children's behavior. It is especially designed to develop and chart behavior modification programs.

Title: PPIT - Principles and Practice of Instructional Technology

Developer: General Programmed Teaching

Source: General Programmed Teaching
424 University Avenue, P.O. Box 402
Palo Alto, California 94302

Description:

This is a multi-media programmed workshop. It consists of fifteen self-contained units, approximately twenty hours of instruction. They include matching content to objectives, testing, grouping, individualization and other professional activities. The course can be used on a group or individual basis.

Title: Programmed Instruction

Developer: Educational Media Laboratories

Source: Technifax Education Division
The Plastic Coating Corporation
Holyoke, Massachusetts 01040

Description:

This series introduces teachers to programmed instruction and provides them with the basis for program selection and evaluation.

Title: The Sensitivity Training Program

Authors: Bruce Joyce, David E. Hunt, Harry Schroeder

Source: Bruce Joyce
Teachers College, Columbia University
525 West 120th Street
New York, New York 10027

Description:

This program attempts to test and train the sensitivity of the teacher to the mental framework and experiential background of the learner. The program consists of five phases: an introduction to sensitivity and analysis of its presence or absence in transcripts of lessons; teaching in two standardized "simulated" lessons; analysis and evaluation of sensitivity in the simulated lesson; teaching in two more simulations and a second feedback session.

Although the program is not yet complete, some of the materials are available such as sample task descriptions, instructions to the role-player, post-questionnaire for the teacher and rating form for the evaluator.

Title: Team Teaching in the Elementary School

Developer: IDEA

Source: IDEA
Information and Services Division
P.O. Box 446
Melbourne, Florida 32901

Description:

This is a training film focusing on a teaching team during an actual school day. A study guide accompanies the training film.

Title: Techniques of Evaluating Types of Literature

Developer: Educational Media Laboratories

Source: Technifax Education Division
The Plastic Coating Corporation
Holyoke, Massachusetts 01040

Description:

This is a course in literary criticism designed for college freshman and sophomores. The five lessons--criticism, essay, short story, novel and drama--present methods of literary evaluation.

Title: Training Competency-Based Instructional Personnel

Source: Dr. George Dickson
Dean, College of Education
University of Toledo
Toledo, Ohio 43606

Description:

This package consists of a video-tape and training guide giving information about developing staff to handle knowledge-level competencies. The package costs \$15.00 plus a blank video-tape.

ADDITIONAL SOURCES ABOUT
COMPETENCY-BASED EDUCATION

The literature about Competency-Based education --its rationale, how to develop a Competency-Based program, how to develop a module, a management system-- is rapidly growing. A number of bibliographies of these materials have been or are being compiled. An analysis of these sources was not within the scope of the present effort. However, in the course of our search, materials about Competency-Based education did come to our attention. We have listed some of the sources of these materials, which can be obtained by writing directly. In addition, John M. Kean of the University of Wisconsin, School of Education, has prepared a listing of mimeographed descriptions for a number of these materials.

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Oregon State System of Higher Education
Monmouth, Oregon 97361

M. Vere DeVault
University of Wisconsin
School of Education
734 University Avenue
Madison, Wisconsin 53706

George Dickson
College of Education
University of Toledo
Toledo, Ohio 43606

Wilford Weber or John Masla
The Center for the Study of Teaching
235 Bishop Hall
1300 Elmwood Avenue
Buffalo, New York 14222

Norm Dodl
College of Education
Florida State University
Tallahassee, Florida 32306

Dr. James Cooper or Dr. Richard Coffing
S.P.U. Center
University of Massachusetts
Amherst, Massachusetts 01006

Dr. Robert Houston
College of Education
University of Houston
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The University of Wisconsin
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